CONSTRUCTION NEWS

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RAILWAYS.

*(*Denotes that this work is advertised in Engineering News.)*

✚Pennsylvania.—Pittsburgh & Lake Erie R. R.—A contract has been let to the ROBERT HILL CONSTRUCTION CO., Fayette City, Pa., to build a line 4.5 miles long, from Downer's Run branch to a connection with the Elwell Run branch.

✚West Virginia.—Baltimore & Ohio R. R.—A contract for grading the Monongahela division from its present terminus to the Pennsylvania State line has been awarded to McMENNEMIN & SIRUS, Morgantown, W. Va. S. D. Brady, Morgantown, W. Va., has charge of the work.

✚Florida.—Florida East Coast Ry.—Contracts have been awarded to the KISSIMMEE VALLEY CONSTRUCTION CO. for the 130 mile extension from Maytown to Lake Okeechobee, and a 30 mile branch from Whittier to Bassenger.

Alabama.—The Alger-Sullivan Lumber Co. has completed surveys for a 25-mile extension of its logging railroad in Monroe and Conecuh Counties, for which bids will be asked about Sept. 15. Edward A. Hauss, Century, Fla., is Sec. and Treas.

Wisconsin.—We are advised that the Railway Commission of Wisconsin is apportioning the cost of track elevation on the south side of Milwaukee, and intends to issue an order that work be started at the beginning of next year. The railroads affected are the Chicago, Milwaukee & St. Paul and the Chicago and Northwestern.

Wisconsin.—Marathon County R. R. —An application has been filed with the State Commissioners for permission to extend its line 9 miles toward Mosinee. W. D. Connor, Marshfield, is Pres.

Minnesota.—Duluth & Northern Minnesota R. R.—This company is considering a 40-mile extension from Lake Echo to Grand Marais.

Texas.—Houston & Texas Central R. R. (Harriman Lines).—Press advices state that this company will extend its line from Stone City through Caldwell to Giddings, about 50 miles. W. L. Bisbee, Austin, Tex., is Supt.

Texas.—Missouri, Kansas & Texas Ry.—It is expected that this company will build its division shops at Waco and make numerous changes and improvements in the yards, including about 40 miles of side track. S. B. Fisher, St. Louis, Mo., is Ch. Engr.

✚A contract has recently been awarded to PATTON & GIBSON for grading at the Ray yards, west of Denison. The capacity of the yard will be increased 700 cars.

Texas.—San Antonio, Rockport & Mexican Ry. Co. has been formed with headquarters at San Antonio to construct a railroad from San Antonio to Brownsville, 240 miles, with a branch line to Port Aransas, 110 miles. It has a capital stock of $350,000. The incorporators are James A White and Thomas C. Berry, San Francisco; Samuel Collyer, Seattle; H. W. Quinan, R. R. Russell, J. H. Haile, John T. Rives, A. L. Davis, J. G. Fowler and A. L. Matlock, all of San Antonio.

Oklahoma.—Oklahoma Northwestern Ry.—A standard gage line will be built from Oklahoma City to Woodward, a distance of 150 miles. An expenditure of $4,500,000 will be made. E. A. Wagenor, E. F. Sparrow, Charles E. Close and others, all of Oklahoma City, are the incorporators.

Colorado. — Denver, Northwestern & Pacific Ry.—This company will build, at an expenditure of $100,000, a 6-mile line from Utah Junction to the Denver Union Stock Yards.

Colorado.—It is reported that the Union Pacific interests will use the proposed James Peak tunnel if constructed by the State and the rights of the various users are so safeguarded that all will have an equal share in its advantages.

Utah. — Southern Pacific Co. — Announcement has been made that 20 miles of the main line between Ogden and the east shore of Great Salt Lake will be double tracked in the near future. About 80 miles of double tracking on this division is under contract. Wm. Hood, San Francisco, Cal., is Ch. Engr.

California.—The Great Western Power Co. and the Holbrook timber interests are making arrangements to construct a railroad from a point on the Western Pacific to the Big Meadows, about 18 miles. The approximate expenditure will be about $1,750,000 and the route favored is that along the north fork of Feather River at the junction of north fork and east branch.

California. — Western Pacific Ry. — Plans are being made to double track the line from Oakland to Sacramento. T. J. Wycke, Mills Bldg., San Francisco, is Ch. Engr.

British Columbia. — Canadian Northern Ry.—This company expects to build a railway from Kamloops, B. C., to Spokane, Wash. T. Turnbull, Winnipeg, Man., is Ch. Engr.

✚British Columbia. — The following announcement has been made by Charles M. Hayes, Pres. of the Grand Trunk Ry.: "A contract for the construction of a 410-mile section of our main line between Aldermere in Bulkley Valley and Tete Jaune Cache, a point fifty miles west of Yellowhead Pass, has just been awarded to FOLEY, WELCH & STEWART, St. Paul, Minn. This is the last uncompleted gap in British Columbia. The work will be pushed from the east and west ends."

ELECTRIC RAILWAYS.

(✚Denotes a contract awarded.)

Brookfield, Mass.—A connection will be made by the Ware & Brookfield Street Ry. Co., of which J. H. Brooks, Milton, Mass., is Pres., at Pond Hill, West Brookfield, with the line owned by the Warren, Brookfield & Spencer St. Ry. Co., of which Robert Redford, Lawrence, is Pres.

Malden, Mass.—The Boston Elevated Ry. Co. has applied for a franchise to build through Medford and Quincy Sts. to the Medford Boulevard. G. A. Kimball, 101 Milk St., Boston, is Ch. Engr.

Ansonia, Conn.—A franchise has been granted to the Connecticut Co., New Haven, to extend to Beardsley Park, by way of Huntington Centre.

Deep River, Conn.—The Shore Line Electric Ry. Co., New Haven, has been granted a franchise to build a line in Main St.

East Hartford, Conn.—The Connecticut Co. has asked to have plans approved by the Board of Railway Commissioners to double track its lines in East Hartford and Manchester. W. P. Bristol, 127 State St., Hartford, is Local Mgr.

Meriden, Conn.—The Berlin Street Ry. Co., has made application for a charter to build a railway between Meriden and Berlin. H. M. Kochersperger, Vice-Pres. of the Connecticut Co., New Haven, is Pres.; J. T. Kelly is Secy., and C. J. Danaher, Meriden, is Atty.

Binghamton, N. Y.—The Binghamton Ry. Co., has made application for a franchise to extend its tracks in the South Side, Binghamton. F. W. Summers, this city, is Ch. Engr.

East Syracuse, N. Y.—The Syracuse Rapid Transit Co. has been authorized by the Public Service Commission, Second District, to begin construction of an additional single track in Manlius St. and Hartwell Ave.

Oneida, N. Y.—The Oneida Ry. Co. will probably begin at once the construction of its Madison St. extension in Oneida. W. J. Harvie, Utica, is Ch. Engr.

Poughkeepsie, N. Y. — The Poughkeepsie City & Wappingers Falls Electric Ry. Co. is planning to improve its Wappingers Falls line. J. W. Hinckley, Jr., 489 Main St., Poughkeepsie, is Pres. and Gen. Mgr.

✚Campbelltown, Pa.—Contracts for the construction of the line between Campbelltown and Lebanon have been let by the Lebanon & Campbelltown Street Ry. Co., to C. J. BARR and WILLIAM S. DAVIS of Lebanon and M. E. BRIGHTBILL of Annville.

Chambersburg, Pa.—The Chambersburg, Greencastle & Waynesboro Street Ry. Co. is securing a right of way to build an extension from Chambersburg to Shippensburg. R. D. Sefton, Waynesboro, is Gen. Mgr. and Pur. Agt.

Owensboro, Ky.—The Henderson Interurban Ry. Co., has secured rights of way for the proposed line between Owensboro and Henderson by way of Dixon, Uniontown, Sebree, Morganfield and Providence. Malcolm Yeaman, Henderson, is Pres. Noted March 16.

Paducah, Ky.—The Kentucky Southwestern Ry., Light & Power Co., Hickman, has recently been formed for the purpose of constructing a railway between Paducah and Hickman. The officers are: H. C. Rhodes, Paducah, Pres.; R. H. Scott, Treas., and John D. Smith, Secy.

Frankfort, Ky.—The construction of a railway from the Western Kentucky Asylum for the Insane to Hopkinsville, about two miles, is being considered by the State Board of Control. The estimated cost of construction and equipment is $35,000.

Cadiz, Ohio.—A railway is projected by the Cadiz Traction Co., recently incorporated by C. S. Scott, R. C. Pittus, Robert P. Scott and Thomas Scott.

Hamilton, Ohio.—The Ohio Electric Co., it is stated, will extend its line, in the Spring, on Main St., at E or F Sts. to Cleveland av. The proposed extension will cost between $15,000 and $20,000. Gaylord Thompson, Springfield, Ohio, is Ch. Engr.

✚Vincennes, Ind.—The Vincennes & Southeastern Interurban Ry. Co., Vincennes, has awarded a contract to the WESTERN CONSTRUCTION CO., for the construction of a railway connecting Vincennes, St. Meinrad, Jasper, Tell City, Troy and West Baden. G. B. Hazleton, Vincennes, is Pres.

Detroit, Mich. — The Detroit United Ry. Co., contemplates building a crosstown line from the southwestern section of the city to the northwestern section and then east into the northeastern.

Chicago, Ill.—The Twentieth Century Transportation Co., Pierre, S. Dak. has been incorporated to build a railway from Chicago to Rapid City, S. Dak., by way of Minneapolis and St. Paul, Minn., and Watertown and Pierre, S. Dak. Robert Bailie, C. B. Keene, Lancaster, Wis.; Ernest Norwood, Winona, Minn., and John A. Holmes, Pierre, S. Dak., are the incorporators.

✚Norris City, Ill.—The Illinois Central Electric Ry., Canton, Ill., has awarded a contract for the construction of its extension from Norris to Farmington to the PORTER CONSTRUCTION CO., Mackinaw, Ill.

Superior, Wis.—The Duluth Street Ry. Co., according to press reports states, that an extension will be built connecting Superior, Bayfield, Allouez and Itasco. It is also stated that the erection of a number of bridges will be necessitated. J. Carson, Duluth, Minn., is Ch. Engr.

Manhattan, Kan. — The Manhattan City & Interurban Ry. Co., according to reports, will soon be in the market for rails, ties, poles, machinery, overhead materials, etc., for the construction of its 15-mile line from Manhattan to Ft. Riley, by way of the Ogden and Eureka Lake stations. Joseph T. West, 217 Yuma St., Manhattan, is Gen. Mgr.

Kansas City, Mo.—A railway connecting Kansas City, Stanley, Stillwell, Louisburg and Fort Scott is contemplated by a group of capitalists, including John Rowe, Shawnee, A. L. Howard and George Casebeer, Louisburg.

Saint Charles, Mo.—The St. Louis, St. Charles & Northern Traction Co., St. Louis, Mo., proposes to build a railway from St. Charles to Laddonia about 77 miles. R. E. Race, Mexico, is Gen. Mgr.

Stuttgart, Ark.—The Suttgart & Southern Ry. Co. has recently been incorporated to build a railway from Stuttgart through Arkansas County to a point on Bayou Meto, a distance of about 25 miles. J. I. Porter, John L. Ingram, Phillip Reinsch, Elliott Tallman, J. W. Underwood, L. E. Morphew and George C. Lewis are the incorporators.

South Denison (Denison post-office), **Tex.**—A franchise has been applied for by the Texas Traction Co., of Dallas, to extend its line to South Denison. R. B. Strichler, Dallas, is Gen. Mgr.

Brigham, Utah.—The Ogden Rapid Transit Co. plans to build an extension from Brigham City, to Grace, Idaho. J. A. West, Ogden, is Ch. Engr.

Seattle, Wash.—The Highland Park & Lake Burien Ry. Co. has been incorporated to build a railway from Seattle to Highland Park and Lake Burien about eight miles. It is reported that contracts will be awarded at once for 21,000 ties and 2,000 ft. of trestle work. Reitz, Storey & Duffy, Northern Bank Bldg., this city, have been retained as Engrs. W. H. Coughlin, 302 American Bank Bldg., Seattle; William H. Murphy, James R. Stirrett and J. R. McLaughlin are the incorporators.

Seattle, Wash. — George W. Dilling, Mayor, has authorized the City Council to sell $800,000 of municipal street car bonds for the acquirement by purchase or condemnation proceedings or for the construction of a new railway through the Ranier Valley, paralleling the line of the Seattle, Renton & Southern Ry., between Fyan St., at the southern city limits, and Stewart and Blanchard Sts. on the north. The ordinance also provides for an extension from Stewart and Blanchard Sts. and Third Ave. to Salmon Bay at Thorndyke Ave., a distance of four miles.

Marshfield, Ore.—The Terminal Ry. Co., Marshfield, Ore., is making preliminary engineering work in connection with the proposed railway in Marshfield from a point several miles above the C. A. Smith mill, on Isthmus Inlet, into Marshfield and down the waterfront of both Marshfield and North Bend, and from North Bend down the coast to Sunset Bay. P. A. Sandberg, former City Engr., of Marshfield, has been retained as Engr.

Fresno, Cal.—The Fresno, Coalinga & Monterey Ry. Co. has made surveys between Fresno and Coalinga, passing through the Los Gatos Pass to Hollister and San Juan and to Salinas and Monterey. Work will be started as soon as the financial backing can be secured. T. C. White, Fresno, is Pres.

Lodi, Cal.—The Central California Traction Co., San Francisco, will probably build a railway from Lodi up Dry Creek and extensions to Sutter Creek and Jackson.

Monterey, Cal.—The Monterey & Pacific Grove Ry. Co., Monterey, plans to build an extension from 19th St. in Pacific Grove by way of Lighthouse Ave., Willow St. and Spruce Ave., to the Presidio of Monterey. William H. P. Hill, Monterey, is Gen. Mgr. and Pur. Agt.

Riverside, Cal.—The Pacific Electric Ry. Co., it is stated will award contracts in the near future for the construction of an extension connecting Riverside, Colton, San Bernardino, Arrowhead and Highlands. George E. Pillsbury, Sixth and Main Sts., Los Angeles, is Ch. Engr.

Sacramento, Cal.—The West Side R. R. Co., 310 Sansome St., San Francisco, has made application for a charter to

BUSINESS NEWS OF THE WEEK.

The shopmen on the Harriman Lines and Illinois Central have evidently concluded that this is not the most propitious time to strike for higher wages and this disturbance is gradually unwinding. The Baldwin Locomotive strike has been finally declared off by the unions who hopelessly lost all points for which they contended. There is a small strike among the painters in Brooklyn and some unrest among the trackmen on the Lackawanna.

The unfilled orders of the U. S. Steel Corporation on August 31st, amounted to 3,695,985 tons, which is not only the largest than at any time this year, but it is larger than any time since July, 1910. The gain compared with last month was 100,000 tons. During the month of August the output of steel ingots was 1,228,000 tons and of finished products about 985,000 tons.

The statistics of the Copper Producers' Association continued favorable to the holders of metal and the surplus stocks were reduced approximately 4,000,000 lbs., being the smallest of any time since December 1910. Another favorable report was issued regarding idle equipment on railways, the number of idle freight cars being reported as 84,541, a reduction of 20,000 cars in the last fortnight. At the corresponding time last year the idle cars numbered 50,000.

The reports issued by the Department of Agriculture regarding the crop outlook were generally unfavorable, although the corn crop condition was slightly improved compared with a month ago. The corn crop is expected to amount to about 2,700,000,000 bushels.

A contract for the last section of the Grand Trunk Pacific in British Columbia for 410 miles was awarded last week.

The railway gross earnings reported by 810 companies operating approximately 241,000 miles of road, show a decrease for the first six months of this year of $29,000,000, or 2.16 per cent. The operating expenses decreased $3,240,000 or 0.34 per cent, making a decrease in net earnings of $26,000,000 or 6.31 per cent.

build a railway connecting Sacramento and Rio Vista. William Herlitz is Secy. and Treas.; B. P. Lillienthal and H. W. Furlong, are Directors.

Saint Helena, Cal.—The San Francisco, Vallejo & Napa Valley R. R. Co. contemplates building an extension from Saint Helena to Calistoga and into Lake County. A loan of $1,500,000 has been secured. W. F. Botsford, 504 Security Bldg., Los Angeles, is Pres.

San Jose, Cal.—The San Jose Terminal Ry. Co. recently incorporated proposes to build a railway between San Jose and Alviso. A trestle five miles long will be built into San Francisco Bay. M. J. Gardiner, Stockton, H. H. McClosky, San Francisco; John A. Mehling, who is Treas., of Hugh Center and Valentine Koch, San Jose, are the incorporators.

✚Oakland, Cal.—The Oakland & Antioch Ry. Co. has awarded a contract to the SHATTUCK-EDINGER CO., 109 East Sixth St., Los Angeles, for grubbing and clearing, grading, concrete, masonry, concrete pipe culverts, trestles, tunnel excavation, frame timbers in tunnels and portals, lagging and piling for tunnel and roadbed for railway, as follows: Grubbing and clearing, $40 per acre; grading, 40 cts. per cu. yd.; concrete masonry, $12 per cu. yd.; concrete pipe culverts, 18, 24, 36 and 48-in., at 40 cts., 60 cts., $1.00 and $1.25 per lin. ft.; timber trestles, $37 per 1,000 ft.; tunnel excavations, $56 per lin. ft. of tunnel; frame timber, $37 per 1,000 ft.; lagging, $27 per 100 ft.; piling, 50 cts. per lin. ft.

Vancouver, B. C.—The British Columbia Electric Ry. Co. contemplates building an extension between New Westminster and Millside.

LIGHT AND POWER PLANTS.

(**Denotes that this work is advertised in Engineering News.*)

Waterville, Me.—Bids have been submitted to City Council for street lighting for five years. The Waterville & Fairfield Railway & Light Co. offers to furnish electricity to light the city with the present equipment at $5,560 per year, and for additional service will charge $10 for each additional arc lamp and $5 for each incandescent lamp, equipment to be furnished by the city, and $5 each for additional fire alarm boxes and police signal boxes, material to be furnished by the city. The Central Maine Power Co. agrees to supply the service at $5,740 per year and to supply additional arc lamps at $50 each, 32-cp. incandescent lamps at $6 each per year, and for additional fire alarm and police signal bells, $4.50 each per year.

✚South Norwalk, Conn.—The general contract for the enlargement of the gas plant of the Housatonic Power Co., has been awarded to the UNITED GAS IMPROVEMENT CO., Philadelphia, Pa. It will have a capacity of from 400,000 to 500,000 cu. ft. of water gas per day.

Freeport (L. I.), N. Y.—The municipal electric lighting plant will be improved, involving an expenditure of about $10,000.

Morgantown, Pa.—Bids will be received by the Board of Education of the Morgantown School District, Morgantown, for the general contract, heating and ventilating, wiring and plumbing. Charles W. Bates, Board of Trade Bldg., Wheeling, W. Va., is the Arch.

Pittsburgh, Pa. — The Allegheny County Light Co. will expend about $200,000 in improvements to its underground system in East Liberty on lines diverging from the Broad St. substation. Underground construction will also be carried along on West Carson St., Second Ave., Federal St. and other streets of the North Side; Fifth Ave., Pen Ave., in sections of Oakland and in other districts in the city. A sub-station costing about $75,000 will be established in the Oakland district. F. Uhlenhaut, Jr., 435 Sixth Ave., is Ch. Engr.

✚Wilmington, Del.—The Wilmington & Philadelphia Traction Co. has awarded a contract to A. S. REED & BROS. CO., Wilmington, Del., for the erection of the addition to its power plant on Buena Vista St. The cost of the plant complete is estimated at $60,000. The company is rebuilding its distributing line extending along Vandever Ave., and across the Eleventh St. Bridge, at a cost of about $10,000. Preparations are being made to install ornamental lamps on Market St., to cost about $15,000. It is expected to have the system ready in October.

***Washington, D. C.**—Bids will be received at the office of the General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10.30 a. m., Oct. 9, in public, for furnishing materials for the hydroelectric station at Gatun, including turbines, governors, head gates, penstocks, air compressors, regulators, electric generators, exciters and traveling cranes. Maj. F. C. Boggs, Corps Engrs., U. S. A., is Purch. Agt.

✚Sistersville, W. Va.—A contract has been awarded by the Sistersville Electric Light & Power Co., Sistersville, for one 20 x 24-in. twin tandem, horizontal, double-acting, four-cycle gas engine. The engine will operate with natural gas and is rated at 1,000 HP., being arranged for direct connection to a 650-KW., 60-cycle, 2,300-volt railway generator, to the MESTA MACHINE CO., Pittsburgh, Pa.

Charleston, S. C.—Bids will be received until Oct. 18 at the office of Ione Simons, City Electrician, for lighting the city streets for a term of one, two or four years with electricity, gas or an equivalent. The estimate requirements are 300 arc lamps, of the inclosed type, of 1,200 cp. Specifications may be had on application. The service is to be furnished by June 30, 1912.

✚Jacksonville, Fla.—Bids were received Sept. 4 for the superstructure of the new electric power station, as follows: W. T. HADLOW & CO., at $44,232 (awarded contract); W. P. Richardson Co., $45,742; Lightman, McDonald Co., $46,300. The contract for moving four pumps and two condensers was awarded to ALLEN CONTRACTING CO., at $828.

Lexington, Ky.—The Kentucky Traction & Terminal Co. contemplates the erection of an ice plant and two substations, one on the Nicholasville line, the other on the Georgetown line. The substations on the Frankfort and Paris line will be rebuilt, it is reported. An expenditure of about $500,000 will be made. Sargent & Lundry, Chicago, Ill., are Consult. Engrs.

Dugger, Ind.—The Town Board has granted a franchise to the Sullivan Electric Co., to install an electric plant.

✚Gary, Ind.—A contract to install a heating plant in the new $300,000 school building has been let to the JOHNSON SERVICE CO., Chicago, at $4,392.

✚Logansport, Ind.—A contract has been awarded to A. J. YAWGER & CO. for building a concrete power dam at Tenth St., at $10,985. A bid was submitted by George H. Palmer at $12,377.

Oakland City, Ind.—The Oakland City College Trustees have authorized plans to be made on which to receive bids for the installation of a new central heating plant to furnish heat to the college buildings.

Rushville, Ind.—The installation of an electric plant for lighting and heating purposes is being considered by the Rushville Furniture Co. The company will buy a 150-HP. boiler, it is stated.

Baraga, Mich.—The Oscar Claussen Engineering Co., National German-American Bank Bldg., St. Paul, Minn., is preparing plans for an electric light plant and water-works system. The cost is estimated at $30,000.

✚Niles, Mich.—A contract for the improvement work on the city electric light plant has been awarded to the ALLIS-CHALMERS CO., Milwaukee, Wis., material for which is to be delivered within 45 days. The contract calls for two generators, two switchboards and two exciters. When completed the plant will be 60-cycle. The board contemplates the installation of new arc lights.

Grand Rapids, Wis.—The Warren & Pettigrew Co., Fox Lake, Wis., is preparing specifications and estimates for a gas plant for the Grand Rapids Water & Electric Co. Bids probably will not be taken before Jan. 1.

✚Madison, Wis.—The State Board of Control has awarded contracts for the equipment for the new power plant at the State Hospital for Insane at Mendota, Wis., as follows: piping, DOWNEY HEATING & SUPPLY CO., Milwaukee, Wis., $8,774; fire pumps, WORTHINGTON STEAM PUMP CO., Chicago, Ill.; water pump, AMERICAN STEAM PUMP CO., Chicago, Ill.

Milwaukee, Wis.—The Board of Trustees, Milwaukee Public Museum, will receive bids until Sept. 18 for doing the following work in the new $500,000 addition to the public museum: (a) ventilating system; (b) power plant electrical work; (c) power plant steam fitting, moving old engines, erecting foundations, etc.

✚Minocqua, Wis.—A contract has been awarded to the CENTRAL CONSTRUCTION CO., Oshkosh, Wis., for the installation of a lighting system, at a cost of $7,500.

Plymouth, Wis.—Thomas S. Watson & Co., Civil Engrs., 807 Majestic Bldg., Milwaukee, are preparing specifications for a new electric lighting system.

Algona, Iowa.—Bids will be received until Sept. 21 for the following: A 100HP. gas producer outfit; 75HP. gas producer outfit; 75KVA. alternating current generator and exciter; 50KVA. alternating current generator and switchboard panel. Ames Engineering Co., Ames, are the Engrs.

✚Clarion, Iowa.—A contract has been awarded to the JENSON CONSTRUCTION CO. to rebuild the electric light plant owned by Moyings & Mack, at a cost of about $4,500. White & Son, Clarion, are the Engrs.

Corydon, Iowa.—The municipal electric light system will be reconstructed at once. Engines, generators, boilers, etc., will be installed. J. J. C. Bower is Town Clk., and the Iowa Engineering Co., Clinton, Iowa, are the Engrs.

Colfax, Iowa.—A franchise has been granted to the Colfax Electric Light Co. to erect a transmission line from its plant at Colfax to Prairie City.

Keokuk, Iowa.—Rights of way have been secured by the Mississippi River Power Co. for a transmission line from its plant at Keokuk, Iowa, to Florissant, Mo. The line begins at Hamilton and extends southward along the Mississippi River to Quincy, thence direct to Alton. The cables will be carried across the Mississippi River at Alton and across the Missouri River at Mullanphy's Island, about 6 miles below St. Charles, thence the lines will run to Florissant. Steel towers, 150 ft. high, will support the heavy cables across the Mississippi and Missouri Rivers. Two transmission lines will be installed from Hamilton to St. Louis. The current transmitted will be equivalent to 100,000HP.

Gilbert, Minn.—The erection of an electric plant is projected, the cost of which is estimated at $15,000. F. A. Bowman, this city, is Engr.

Thief River Falls, Minn.—Bids will be received until Sept. 19 for constructing an auxiliary power plant, the cost of which is estimated at $40,000. Bids for the bonds will be received until Sept. 16. E. Wolf, Minneapolis, is Engr., and N. J. Anderson is City Clk.

La Cygne, Kan.—The J. S. Worley Co., Reliance Bldg., Kansas City, Mo., has prepared plans for the construction of an electric-light plant and waterworks system, for which bids will be asked in the near future. An expenditure of $30,000 will be made, it is reported.

Ness City, Kan.—A bond issue has been voted for an electric light plant bids for which will be received about Sept. 15. A. W. Wilson is Mayor.

✚Brookings, S. Dak.—Bids were opened Sept. 6 and contracts were awarded as follows: Wood furniture, BROWN & SAENGER, Sioux Falls, S. Dak., at $6,869; for steel furniture, GENERAL FIREPROOFING CO., Youngstown, Ohio, at $5,000; for electrical fixtures, MINNEAPOLIS GAS FIXTURES CO., Minneapolis, Minn., at $2,500.

✚Bismarck, N. Dak.—A contract has been awarded to GRAMBS & PEET, Bismarck, at $12,157, to install 128 ornamental lamp posts.

Butte, Mont.—Bids will be received until Oct. 12 by the Board of County Commissioners for furnishing lighting fixtures for the new county court house. Link & Haire, 705 State Savings Bank Bldg., Butte, are the Archs.

Missoula, Mont.—The installation of a street lighting system is contemplated by the Missoula Light & Power Co. The cost is estimated at $10,000.

Laclede, Mo.—A 5-mile transmission line from the plant owned by the Brookfield Electric Light Co. to Laclede will be built.

✚St. Joseph, Mo. — A contract has been awarded to the AMERICAN ELECTRICAL CO., St. Joseph, for electrical work on the new Burlington Swift-Armour bridge, which is being erected on the old Winner piers. An expenditure of about $25,000 will be made.

Austin, Tex.—The contract that was recently entered into by the city commission of Austin with William B. Johnson, of Hartford, Conn., representing the Hydraulic Properties Co., 60 Broadway, New York, N. Y., for the reconstruction of the large dam across the Colorado River and the installation of a hydro-electric plant, which work shall cost $1,720,000, has just been ratified by vote of the people of the city. Owing to the fact that these public works are to be paid for out of the earnings of the municipal light and power plant the right to vote on the proposition was not confined to the tax payers. Under the terms of the present contract the city is to pay to Mr. Johnson $100,000 for the completion of the dam and hydro-electric plant and the rest of the $1,720,000 is to be paid in semi-annual installments of $32,400, each without interest. The contractor is to operate the power plant during this term of years and deliver to the city all power generated and to install equipment capable of producing 7,200 HP. A minimum of 600,000HP. hours per month is guaranteed. The height of the dam will be 65 ft. The City Commission reserves the right of making and regulating the rates for water and electric lights of consumers. Besides the dam and hydro-electric plant the contractor must construct a water storage reservoir of 10,000,000 gal. capacity for the purpose of keeping on hand a reserve supply for the use of the city and install pumps to keep this reservoir full. The works must all be finished within two years. Preliminary construction work has been started. The dam will be of concrete construction.

Temple, Tex.—The Temple Gas Co. is preparing to rehabilitate its gas plant. Considerable new machinery will be installed and the mains of its distributing system will be relaid.

Boulder, Colo. — A municipal power plant is being considered.

Las Cruces, N. Mex.—The Las Cruces Electric Light Co. has issued $75,000 of bonds for the installation of new machinery and other improvements to its electric light and power plant.

Ogden, Utah.—The Utah Light & Ry. Co., Salt Lake City, is considering a plan, it is reported, to raise its dam at Ogden Canyon to an elevation of 4 ft. L. L. Dagron, Salt Lake City, is Engr.

Lyle, Wash. — The Northwestern Electric Co. has purchased 12 miles of water rights on the Klickitat River, near here, from Ham, Yearsley & Ryrie, Spokane. The purchase price was $75,000. The company is now building a large power plant near here and according to reports an additional plant will be built. Herbert Fleischhacker, San Francisco, Cal., is interested.

✚Olympia, Wash. — A contract has been awarded by the Olympia Light & Power Co. to A. A. BOREY & CO., Tacoma, at $18,000, for construction of the Lake Lawrence reservoir on the Des Chutes River.

Los Angeles, Cal.—An expenditure of about $200,000 will be made by the Southern Pacific Co., it is reported, for the installation of electr[illegible]eadlights in its engines.

Bids will be received u[illegible]ct. 20 for equipping the San Fran[illegible] to No. 1 power site, which is loc[illegible] about 47 miles north of Los Angel[illegible] The plant will have a capacity of [illegible] H.P. and will cost about $350,000. [illegible] Scattergood is Ch. Engr.

Pasadena, Cal. — One [illegible] was submitted for installing orn[illegible]tal electric light posts and wir[illegible]n South Orange and Columbia Sts.[illegible] was returned unopened. New [illegible] will be asked for. The cost is [illegible]mated at $50,000.

✚Richfield (Anaheim P[illegible]ice), **Cal.**—A contract has been aw[illegible]ed to the PIONEER BOILER & [illegible]ACHINE WORKS, Carolina and P[illegible]etto Sts., for installing machinery a[illegible] four 1,000 gal. oil tanks in the new [illegible]efinery.

San Francisco, Cal. — T[illegible] Board of Public Works will receive bids until 3 p. m. on Sept. 20 for the following work: For furnishing and installing ice-making and refrigerating plant in the power house and laundry building of the San Francisco Hospital, and installing steam, gas and water piping for tunnel work, and installing boilers, boiler room auxiliaries and piping, and installing steam turbines, generators and main switchboard in the power house and laundry building and other appliances.

London, Ont.—A move to extend the ornamental street lighting system is being made by the citizens. The petition asks for 325 lamp standards, with a cluster of five lamps on each.

Prince Albert, Sask. — An appropriation of $700,000 for the construction of a hydro-electric power plant at La Colle Falls has been authorized.

Red Deer, Alta.—The Galt Engineering Co., Calgary, has been retained to make preliminary surveys for the construction of a municipal hydro-electric plant. R. T. Davidson is Secy. of Bd. of Trade.

✚Vancouver, B. C.—The British Columbia Electric Ry. Co., Ltd., has awarded a contract to C. C. MOORE & CO., Seattle, Wash., for the extension of its auxiliary steam power plant, operated in connection with the Vancouver substation at Main and Barnard Sts., at a cost of about $250,000, to be completed by Dec. 18.

BRIDGES.

(*✚Denotes a contract awarded.*)

Fall River, Mass.—Bids for the construction of an arch bridge over the railroad tracks at the lower South Park were received by the City Auditor on Sept. 2, as follows: Beattie & Wilcox, $32,954; Fred Ley & Co., Springfield, $33,500; Lathrop & Shay, New Haven, $54,905; Beattie & Cornell, $27,600 if gravel instead of crushed stone is used, $26,400; Simpson Bros. Co., Boston, $31,619, gravel in abutments, $30,619.

Kingston, N. Y.—The two lowest bids received on Sept. 5 by the Board of Water Supply, 165 Broadway, New York, for constructing two reinforced-concrete arch bridges, were: Harrison & Burton Co., $240,222; Charles Lend & Co., $266,220.

New York, N. Y.—A permit has been issued to the Lakeville Holding Co. to construct two iron and concrete bridges on the Lakeville Road, near Little Neck, and within the Borough of Queens, which are to carry the Long Island Motor Parkway across that road.

Conshohocken, Pa. — Press reports state that engineers of the Reading Ry. have prepared plans for a proposed $250,000 bridge between Conshohocken and West Conshohocken. The structure would pass over the Schuylkill River and the tracks of the Norristown branch and the Main Line of the Reading.

✚North Braddock, Pa.—We are officialy advised that the contract for constructing a steel bridge and stairway complete, crossing over the main tracks and siding of the Pennsylvania R. R. at 13th St., in the Boroughs of Braddock and North Braddock, was awarded on Sept. 5 to the PENN BRIDGE CO., Beaver Falls, Pa. C. A. Stewart is Boro. Engr. Noted Aug. 31.

Washington, D. C.—It is proposed to construct a bridge across Rock Creek at P. St., at a cost of $275,000. Bids will probably be asked early next year. T. C. J. Bailey, Jr., is Engr. of Bridges.

Sussex, Va.—Bids will be received by the Clerk of the Circuit Court, until noon, Sept. 18, for constructing five steel and concrete bridges, ranging in length from 34 to 95 ft. Plans are on file with the Childrey, Sunday Co., Richmond. P. St. J. Wilson is State Highway Comr.

Birmingham, Ala. — Jerry W. Gwin, Surveyor of Jefferson County, has prepared plans for the proposed new highway bridge over the Warrior River on the road from Warrior to Blountsville, a part of the Decatur-Birmingham highway. The structure will be of steel with one span of 400 ft., and will cost $15,000.

Vicksburg, Miss. — Bids will be received by the City of Vicksburg and Warren County until Sept. 23, for reconstructing the bridge at Glass Bayou. Estimated cost, from $10,000 to $12,000. A. M. Paxton is City Clk.

Cleveland, Ohio.—Bids will be received by the Board of Commissioners of Cuyahoga County until 11 a. m., Sept. 20 and Oct. 7, for bridge construction. John F. Goldenbogen is Clk.

Wapakoneta, Ohio.—Bids will be received by A. E. Schaffer, County Audr., until Sept. 16, for constructing two bridges.

Youngstown, Ohio.—Bids for constructing the Dewey Ave. bridge were received by the County Commissioners on Sept. 2, as follows: Fort Pitt Bridge Co., $14,74[illegible]; Hunter Construction Co., $11,558; Penn Bridge Co., $13,422; Capital Construction Co., $13,000; Wayne-Harris Construction Co., $11,000.

Elkhart, Ind.—The County Commissioners are considering the construction of a bridge over St. Joseph River on Elkhart Ave., at a cost of $45,000.

Greenfield, Ind.—Bids will be received by Charles H. Troy, County Auditor, until Sept. 19, for constructing a reinforced-concrete bridge in Blue River Township.

Richmond, Ind.—The Wayne County Commissioners have decided to build a bridge over Whitewater River, in the south part of the city. It will be of concrete construction, about 700 ft. long and [illegible]0 ft. wide. The main arch will be 96 ft. above the water line. Plans and specifications for the structure will not be complete before the first of next year. There has been no accurate estimate of the cost, but it probably will be between $75,000 and $100,000.

Moline, Ill.—Bids will be received by C. Milton Stone, Town Clk., until 3 p. m., Sept. 18, for constructing a reinforced-concrete bridge in South Moline Township.

Pearl City, Ill.—Bids will be received by Fred Tollmeier, City Clk., until 2 p. m., Sept. 19, for constructing a reinforced-concrete bridge in Pearl City.

Appleton, Wis. — The Outagamie County Board of Supervisors are considering the construction of a steel bridge over the Fox River at Kimberley, to cost $25,000.

Superior, Wis.—See item under Electric Railways.

Des Moines, Iowa.—Bids for constructing a bridge over Four Mills Creek has been received as follows: (a) single arch bridge, (b) double-arch bridge: N. M. Stark, Consult. Engr., (b) $6,940; J. W. Turner Improvement Co., (a) $4,689, (b) $6,425; John Wheeler Construction Co., (a) $4,400, (b) $6,020; Marsh Engineering Co., (a) $5,874, (b) $7,000.

Minneapolis, Minn.—Press reports state that Olaf Searles, a citizen of Minneapolis, has offered to build a bridge from Tonka Bay to Big Island, across Lake Minnetonka, at a cost of $100,000. The proposition will be laid before the Board of Commissioners of Hennepin County.

Independence, Mo.—Bids will be received by the County Court at Independence until Sept. 18 for constructing five concrete bridges and five masonry culverts, and until Sept. 20, for two concrete bridges. Rowland T. Proctor is County Survey.

Kansas City, Mo.—Preliminary plans have been prepared by the Missouri Valley Bridge Co., Leavenworth, Kan., for the viaduct to connect Kansas City, Kan., and Kansas City, Mo. The Missouri terminal will probably be on Kansas Ave. The cost is estimated at $150,000.

St. Charles, Mo. — See item under Electric Railways.

Burley, Idaho.—Bids will be received by the Bridge Committee until Sept. 28, for constructing a steel pile highway bridge across Snake River, near Burley. R. E. Robinson, Boise, is State Engr.

✚**Spokane, Wash.**—Press reports are to the effect that the contract for constructing the Latah Creek bridge has been awarded to J. E. CUNNINGHAM, at $416,000.

San Bernardino, Cal.—J. S. Bright, Jr., County Survey., is preparing plans for a steel bridge to be constructed over the Santa Ana River. It will be 18 ft. wide and 540 ft. long, composed of nine 60-ft. steel truss spans. Bids for the construction work will soon be asked.

San Jose, Cal.—See item under Electric Railways—Trestle.

BUILDINGS.

(**Denotes that this work is advertised in Engineering News.*)

✚**Boston, Mass.**—The contract for the $60,000 residence for Henry D. Burnham, at 96 Beacon St., has been awarded to L. D. WILLCUTT & SONS CO., 146 Summer St. Wheelwright & Maven, 220 Devonshire St., are the Archs.

Cambridge, Mass. — Six 3-apartment houses are to be erected for H. D. McGray, 90 College Ave. Total cost, $42,000.

Canton, Mass.—Bids will be received until Sept. 14 by the Massachusetts Hospital School Trustees for preparing site and erection complete of a barn and assembly hall (excepting steamfitting, plumbing and electrical appliances). Samuel W. Mead, 13 Pemberton Sq., Boston, is the Arch. and Edward H. Bradford is Chm. of Trustees.

Easthampton, Mass.—A hotel will be built on the lot adjoining the Majestic Theatre, to contain 50 rooms and to cost $[illegible]7,000. Henry Walz is the owner.

✚**Holyoke, Mass.**—The contract for the [illegible]-story apartment block to be built on Elm St. for Mrs. Louisa Tracey has been awarded to LOUIS LA FRANCE. To be 122 × 75 ft. of brick and limestone construction. George P. B. Alderman and Brother are the Archs.

✚**Lynn, Mass.**—The contract for a storage warehouse for M. R. Connolly on Liberty St. has been awarded to ANDREW McLELLAN, 3 Stewart St. To be 50 × 50 ft., two stories, of wood.

New Bedford, Mass. — Bids will soon be asked for the headquarters on Acusnnet Ave., of the Laurier Club. To be of brick, three stories, 166 × 38 ft. Edward Francois, 50 Tallman St., is the Arch.

Brookline, Mass.—Bids are being asked for two apartment houses on Tappan Road by Robert H. Goode. To be of brick 70 × 40 ft., to cost $60,000 for both.

Easthampton, Mass.—This town has made an appropriation of $48,000 for the erection of a high school. Plans for a brick building, 75 × 87 ft., with gravel roof and steam heat, have been prepared by Clarence P. Hoyt, Arch., Boston, Mass.

✚**Gardner, Mass.**—The contract for the court and police headquarters has been awarded to CAROL & HILAIRE. C. F. Boutelle, Gardner, and Edwin T. Chapin, Worcester, are the Archs.

✚**Northampton, Mass.**—Contract for the erection of a church building for St. John's Roman Catholic Society has been awarded as follows: Mason work, MICHAEL MALONEY, Springfield, Mass.; carpenter work, painting and roofing, FRANK P. MOREY, Springfield, Mass.; cut stone work, A. D. STONE & CO., Springfield, Mass.; terra cotta, THE ATLANTIC TERRA COTTA CO. The structure will be 45 × 125 ft., of gray tapestry brick with terra cotta, and granite trimmings and slate roof, steam heat and electric lights. Jno. Wm. Donoghue of Springfield, Mass., is the Arch.

Holyoke, Mass.—Oscar Beauchemin has completed the plans for the store and apartment block to be erected at Dwight and Clinton Sts. for Doryle Gautnier. The building will be of brick, 60 × 90 ft., five stories high, with pressed brick front and stone trim. The owner is receiving the bids.

✚Contracts for a block of 14 Philadelphia Cottages comprising a structure 290 × 40 ft., to be erected on Davis St. for D. G. Bowler, have been awarded to DANIEL O'CONNELL'S SONS for the mason work; J. H. FOWLES & SON, carpenter work; and DAVID McCORMICK & CO., the cut stone work. The plans were drawn by Ellsworth & Howes, and provide for steam heat and electric light.

✚**Springfield, Mass.**—The Chicopee National Bank on Main St. is about to spend $50,000, mainly in interior remodeling. Thomas M. James, Boston, is the Arch. Contract has been awarded to CASPER RANGER, Holyoke.

✚**Holyoke, Mass.**—Contracts for the erection of a 3-story apartment block, 106 × 57 ft., of brick, with pressed brick front, for Joseph Laplante, on St. Jerome Ave., have been awarded to JOHN J. PREW for the mason work and ALBERT ARCHAMBAULT for the cut stone work. The owner will do the carpenter work.

Hartford, Conn.—Plans for the $1,000,000 hotel to be erected on the present site of the Allyn House, 152 Asylum St. have been prepared for Robert J. Allyn, and bids will be asked for the work in a few days. The new building will be 180 × 140 ft. ,ten stories high. The old building will be demolished and business will be suspended during the construction of the hotel.

✚**Baltic, Conn.** — FENTON-CHARNLEY BUILDING CO., of Norwich, Conn., has been awarded the general contract for the new church for St. Mary's Roman Catholic Society. The plans were drawn by Chickering & O'Connell, Archs., of Boston, Mass., and provide for a building of brick with slate roof and a seating capacity of 800, to cost $45,000.

Bridgeport, Conn. — C. T. Beardsley, Jr., 157 State St., Bridgeport, is preparing plans for a schoolhouse for the City of Bridgeport, to be erected at Poplar St. and Maplewood Ave. The building will be of brick, containing eight rooms and will cost $45,000.

✚**Danbury, Conn.**—W. W. SUNDERLAND has been awarded the contract for the carpenter work and LUKE SWEENEY that for the mason work, for the business block on Main St., for McLean Bros. The building will be of brick, two stories high, 35 × 140 ft., with gray pressed brick front. Philip Sunderland is the Arch.

Hartford, Conn.—A. Raymond Ellis is preparing plans for a residence to be erected on Prospect Ave. for Morgan G. Buckley, Jr. The house will be about 64 × 37 ft., two stories high, of brick and finished in hardwoods throughout.

✚**Greenwich, Conn.** — The contracts for the erection of a $70,000 residence on Round Hill for Edward T. Holmes, 26 Courtlandt St., New York City, have been awarded to J. P. CROSBY, for the carpenter work, and JOSEPH CHRISTIANO for the mason work. The building will be 67 × 137 ft., of brick and stone, two and one-half stories high, with slate roof and steam heat.

✚**New Haven, Conn.** — The general contract for the erection of the building on Chapel St. for the S. S. Kresage Co. has ben awarded to the SPERRY ENGINEERING CO., of New Haven. The structure was planned by Arch. Philip Sellers and will be of brick, three stories high, 40 × 140 ft. Noted Aug. 10.

Estimates will soon be called for, on plans drawn by Ewing & Chappell, 345 Fifth Ave., New York City, for a residence on Prospect St., for Franklin Farell, Jr. The house will cost about $40,000.

Westport, Conn.—Ernest G. Southey 983 Broad St., Bridgeport, Conn., is preparing plans for a fireproof exchange building here for the Southern New England Telephone Co.

✚**Winsted, Conn.**—From plans of C. C. Benedict, 51 Leavenworth St., Waterbury, Conn., the TORRINGTON BUILDING CO., of Torrington, Conn., has been awarded the contract to erect the new building on Main St. for Clifton Lodge No. 30, I. O. O. F. It will be 46 × 115 ft., three stories high, of brick and concrete, with limestone trim, and will be arranged for stores and lodge rooms. Dr. F. E. Roys is Chm. of Bldg. Com.

✚**Smithtown, Long Island, N. Y.**—The H. WALES LINES CO., Meriden, Conn., has been awarded the contract for a residence for R. Burnside Potter, the plans for which were drawn by Potter & Robinson, of New York. It will be built of unit brick, with reinforced concrete, tile, marble and asbestos floors, finished in a variety of hardwoods, and heated by three hot air furnaces.

Syracuse, N. Y. — A. L. Brockway, Syracuse Savings Bank Bldg., is preparing plans for a terminal building, 100 × 300 ft. of brick and steel, with concrete floors, to be erected on West Water St.

Albany, N. Y.—Bids are being received by Dr. J. V. Sheppey, Physical Director, Knickerbocker Athletic Club, 11 Madison Ave., Albany, N. Y., for the construction of a one story brick, concrete and steel structure, to be used as an athletic building, 100 ft. by 200 ft., on Lark Street. The building will have a seating capacity of 8,000, with gallery, shower baths, plunge, steam heating, slag roof, etc., maple and cement floors. Edward Ahrens, 100 State St., Albany, N. Y., is Arch.

✚**New York, N. Y.**—The contract for masonry work has been awarded to T. J. WATERS CO., 271 West 125th St. for the 10-story apartment house at Broadway and 143d St. The McMorrow Engineering & Construction Co., is owner. Plans by Neville & Bagge, 217 East 125th St.

Plans have been completed by Neville & Bagge, 217 West 125th St. for the construction of a 6-story tenement house to be erected at 115th St. and Manhattan Ave. for the Gorham Contracting Co., 50 West 86th St. The estimated cost is $225,000.

Plans have been completed by Mulliken & Moeller 103 Park Ave., for the construction of a 12-story apartment house at 536 West End Ave. The 86th St. and West End Ave. Co., 2 Wall St. is the owner. The cost is $525,000.

Plans have been completed by Rouse & Goldstone, 38 West 32d St. for the erection of a 9-story apartment house at 314-320 West 87th St. for the Brixton Construction Co., 808 West End Ave. The cost is $290,000.

✚The contract has been awarded to J. H. SCHEIER, 314 Madison Ave. for alteration to the 7-story store and tenement building at 306-316 Columbus Ave. S. M. Banner is owner.

✚The THEODORE STARRETT CO. has been awarded the contract for the erection of a 9-story apartment building, 75.10 × 85 ft. at 118-124 East 54th St. The 118 East 54th St. Co. is the owner. The cost is about $180,000.

New York, N. Y.—Bids will be received by the Armory Board, Hall of Records, Chamber and Centre Sts., until 2 p. m., Sept. 26, for the reconstruction of the Third Battery Armory, 165 Clermont Ave., Boro. of Brooklyn.

***Tarrytown, N. Y.**—Bids will be received by the Board of Water Commissioners, until 7.30 p. m., Sept. 27, for laying about 11,000 ft. of 10-in. c.-i. water mains and 2,000 ft. of smaller sizes. David S. Merritt is Supt. Water Wks.

Yonkers, N. Y.—The Board of Contract and Supply (James V. Mahony, Secy.), will receive bids until Sept. 18, for the erection of a scarlet fever hospital according to plans of George Starin Cowles, Arch. The cost, including architect's fees, is not to exceed $75,000.

The New York Central R.R. has filed plans for a new station at the foot of Main St.

Ridgefield Park, N. J.—Bids will be received until Sept. 15, by Adolph Freud, Jr., Clk. Bd. Educ. of Overpeck Township, for erecting a school. Ernest Sibley, Palisade, N. J., is Arch.

✚**New Castle,. Pa.**—The Building Committee of the Second United Presbyterian Congregation awarded the contract for the erection of the proposed church to S. R. HUEY, at $50,000.

✚**Pittsburgh, Pa.**—J. G. FULLMANN has been awarded the contract for a $40,000 apartment building designed by C. E. Willoughby, Arch., to be erected at Ellsworth Ave. and Clyde St., for H. F. Gabel.

Plans have been approved for the largest building in the group of structures that constitute the Carnegie Technical Schools. The new building will be for the School of Applied Design. It will cost over $800,000.

Philadelphia, Pa.—Plans are being prepared by De Armond, Ashmead & Beckley for two tenement buildings between 45th and 46th Sts. The cost is $200,000.

✚JOHN McSHANE has a contract to build a 3-story convent, 34 × 67, with a wing 17 × 19 ft., at 55th and Cedar Ave., for the Church of the Transfiguration. The contract price is $55,000.

Waynesburg, Pa.—Bids are wanted until Sept. 15 for erecting a 2-story, 80 × 114 ft., edifice for the members of the First Baptist Congregation. Probable cost, $45,000. A. P. Cooper, First Natl. Bank. Bldg., Uniontown, is Arch.

Baltimore, Md.—Bids are being received at the office of J. Edward Laferty, Arch., 11 East Pleasant St., for construction of Masonic Temple at Towson, Md.

✚**Baltimore, Md.**—WILLIAM H. PORTER & SONS have been awarded the contract to build a large department store on North Gay St., for Benjamin Mayer. The store will occupy sites of the buildings at 526, 528 and 530 North Gay St.

Baltimore, Md.—The Baltimore News Co. will erect a warehouse at 227 North Calvert St., to be 3-story, brick, slag roof, steam heat, electric lighting; Owens & Sisco, Continental Bldg., are the Archs.

Westminster, Md. — The Mather Printing Co. has plans and specifications by Owens & Sisco, Archs., Continental Bldg., Baltimore, Md., for store and office building, will be of brick construction, steam heat, electric lighting. Plans are about completed.

Richmond, Va.—A school building, costing $55,000, will be erected in the Fern Park tract, it is reported. The cost will be about $150,000.

✚**Grafton, W. Va.**—John T. McGraw awarded contract to J. J. WALSH & SONS, 1533 Maryland Ave., Baltimore, Md., for construction of hotel, six stories and basement, basement to contain kitchen, lunchroom, entrance lobby, refrigerating machinery, etc. Plans by M. A. Long, 6 Elmhurst Road, Roland Park, Md.

Lexington, S. C.—Bids will be received by the Board of Trustees, Lexington School, Dist. One, until Sept. 25, for erecting a 2-story school. Plans by G. Lloyd Preacher, Arch., Augusta, Ga.

Gainesville, Fla.—Bids will be received until Sept. 30 by W. W. Hampton, Chn., J. H. Vidal, Secy., of Bd. of Trus. Sub-school Dist. 26, for erecting a 2-story and basement brick school. McClure and Holmes, Archs., 135 East Bay St., Jacksonville, prepared the plans

Ensley, Ala.—Bids were received as follows on Sept. 7, by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., for the construction of a post-office building at Ensley, Ala.: (a) limestone; (b) sandstone: Algernon Blair, Montgomery, Ala., (a) $44,700; (b) $46,200. George W. Stiles Construction Co., Chicago, (a) $41,700. Interstate Construction Co., Saginaw, Mich., (a) $46,758; (b) same. Newport Contracting & Engineering Co., Newport News, Va., (a) $44,431; (b) $45,431. A. Anderson & Co., St. Louis, Mo., (a) $41,995. C. C. Sotheron & Co., Birmingham, Ala., (a) $52,263; (b) $53,263. J. F. Culpepper & Son, Ensley, Ala., (a) $75,667; (b) $76,996. Barnes Bros., Logansport, Ind., (a) $42,900; (b) $43,600. George Becking, Chattanooga, Tenn., (a) $43,852.

Gadsden, Ala.—Bids were received as follows on Sept. 5, by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, for the construction of an extension to the U. S. post-office building at Gadsden, Ala.: Newport Contracting & Engineering Co., Newport News., Va., $100,345. Interstate Construction Co., Saginaw, Mich., $94,262. John G. Unkeier & Co., Minerva, Ohio, $100,681. Algernon Blair, Montgomery, Ala., $100,000. George Becking, Chattanooga, Tenn., $102,263.

Nashville, Tenn.—Bids will soon be received for the erection of a 3-story apartment house for A. S. Weinbaum at West End Ave. and Church St. The building will be practically fireproof. The floors will be of reinforced concrete overlaid with finished oak, while the partitions will be of hollow tile and brick and all corridors will be of tile with marble wainscoating. There will be 108 rooms. The estimated cost is $50,000.

Louisville, Ky.—The Louisville Lead & Color Co. has been granted a permit to erect a 5-story, brick warehouse on a lot in Lytle St., extending from 14th to 15th St. The structure will be 95 × 195 ft., and the estimated cost is $70,000.

✚**Belle Valley, Ohio.** — GEORGE FOREMAN, of Marietta, has the contract for St. John's Catholic Church at Belle Valley.

Urbana, Ohio.—Bids will be received by the Board County Commissioners at office of C. E. Russell, Co. Aud., until Sept. 14, for the erection of a brick school building on grounds of the County Children's Home. R. C. Gotwald, Springfield, is Arch.

Columbus, Ohio. — Marriott, Allen & Hall have completed plans and specifications for the 10-story Knights of Pythias temple, to be erected on East Long St. Bids for the construction will be asked for soon.

Cleveland, Ohio. — Bids will be received until Sept. 23 by Carl Lorenz, Secy. Pub. Library Bd., for erecting a library building on East 30th St., near Central Ave.

Ft. Wayne, Ind.—The trustees of the Lutheran hospital has ordered plans for the improvement of the hospital building. Bids will be received as soon as plans are completed. Bids will also be received for the construction and equipment of a new laundry building.

Greencastle, Ind.—The Trustee of Washington Township, Putnam County, will receive bids until 2 p. m., Sept. 22, for the construction of a school building in district four.

Indianapolis, Ind.—Plans have been authorized by Olson & Barton for the erection of a theatre and hotel building on Illinois St., near Market St. The building will be five stories high of brick and stone construction.

Indianapolis, Ind.—Bids will be received by John E. Cleland, Bus. Dir. for the School Board, at 312 North Meridian St. until 8 p. m., Sept. 26, for the erection of an 8-room brick school building on Eleventh St. and Traub Ave. R. P. Daggett & Co., are the Archs.

The Pennsylvania Building Co. has incorporated with a capital of $150,000. The company will let contracts for the erection of buildings on site purchased in North Pennsylvania St. L. A. Coleman, E. W. Zaiser and Lynn Millikan, Dir.

Lafayette, Ind.—P. G. Choinard is planning to erect a large and modern hotel on Main St., between Sixth and Seventh Sts.

Lebanon, Ind.—W. H. Gallimore will ask for bids, as soon as plans are made, for the erection of a 3-story concrete building on Court House Ave. and also for a cold storage and ice plant on the West Side.

Marion, Ind.—The County Council and the County Comrs. are considering plans for the construction of a county hospital on a site recently donated.

Muncie, Ind.—The City Council of Muncie, Ind., is preparing to construct a market house and establish a public market.

New Augusta, Ind.—Emsley Johnson, W. W. Maines and W. B. McDonald, Dirs. of the newly organized New Augusta State Bank, are considering a site on which to erect a bank building.

Princeton, Ind.—Robert Sherman, owner of the Princeton theatre, has ordered plans for the erection of a modern theatre building on the site of the present theatre. Bids will be solicited as soon as plans are completed. Burbaker, Sternes & Boyle, Evansville, Ind., Arch.

✚Terre Haute, Ind.—Contracts for the erection of two buildings at St. Mary-of-the-Woods, a Catholic school near Terre Haute, have been let to the BEDFORD STONE & CONSTRUCTION CO. One of the buildings will be used as a conservatory of music, while the other will be used as a dormitory and for other college purposes. The buildings will be of fireproof construction. They will be of Bedford stone, supplemented by brick and reinforced concrete. The dormitory building will be four stories high and will be 150 × 190 ft. It will furnish accommodations for one hundred girls. The music building will be three stories high.

South Bend, Ind.—Bids for the proposed $300,000 high school have been received and opened by the School Board, but as yet the contract has not been awarded. The bids received were from W. M. Allen & Sons Co., Peoria, Ill., $329,000; Larsen & Danielson Construction Co., Laporte, Ind., $297,522; Pulse & Porter, North Madison, Ind., $327,819; William B. Jungclus Co., Indianapolis, Ind., $295,800; Warren Construction Company, Chicago, $308,544; Hiram Lloyd Building & Construction Co., St. Louis, $300,277; Conners Bros., Lowell, Mass., $410,000; Pelligreen Construction & Investment Co., St. Louis, $279,000; English Bros., Champaign, Ill., $281,800; E. C. Gerhard, St. Louis, $275,000; H. G. Christman Co., South Bend., $275,613; E. A. Steininger Construction Co., St. Louis, $280,000; Murch Bros. Construction Co., St. Louis, $297,500, and James Barnes, Logansport, Ind., $278,234. All contractors were asked to bid on four kinds of material to be used in the construction of the building. The lowest figures submitted by the bidders are the ones given above. The bids asked for cover just the general work, contracts for wiring, plumbing, heating, and ventilation will be asked for at a later date.

Detroit, Mich.—M. M. Staphlet, 606 Nasby Bldg., Toledo, has awarded the general contract for the 3-story and basement hospital building, 41x175 ft., for the Flower Hospital Association to W. W. BRIGHT CONSTRUCTION CO., 2030 Adams St. Cost, $100,000.

George S. Mills, 1234 Ohio Bldg., Toledo, is pfeparing plans for a 6-story and basement clubhouse, for the Toledo Club, Madison and Huron Sts., Toledo. Cost, $50,000.

A. W. Johnson, 711 Spitzer Bldg., is preparing plans for a 5-story theatre and lodge building, 63x165 ft., with a seating capacity of 1200. The building will be of reinforced concrete, and structural iron construction. Cost, $70,000.

Detroit, Mich.—Baxter & O'Dell, 1024 Hammond Bldg., Detroit, are preparing plans for a 1-story and basement store building, 107 × 132 ft., for E. E. Galloghy, Milwaukee and Cass Aves. Cost, $30,000.

Malcomson & Higginbotham, Archs., 404 Moffat Bldg., and Ammerman, McColl & Anderson, Engrs., 1330 Penobscot Bldg., Detroit, have prepared plans for a 2-story and basement school building, 73 × 148 ft., for the Board of Education, M. R. Marr, Secy., 50 Broadway. The Board of Education will receive bids soon. Estimated cost, about $75,000.

Baxter & O'Dell, 1024 Hammond Bldg., Detroit, is preparing plans for a 2-story warehouse, 58 × 120 ft., for Arthur L. Holmes, 877 Gratiot Ave.

✚Spier, Rohn & Gehrke, 1325 Chamber of Commerce Bldg., have awarded the following contracts for the 5-story stock warehouse, 80 × 180 ft., for the Stroh Brenning Co., 253 Elizabeth St. East: Structural iron work to the DONOVAN WIRE & IRON WORKS, Toledo, Ohio, masonry to CHASE & SCHULZ, 825 Chamber of Commerce Bldg., Detroit. Cost, $45,000.

Baxter & O'Dell, 1024 Hammond Bldg., Detroit, are preparing plans for a 6-story warehouse addition, 25 × 100 ft., for the Pringle Furinture Co., 121 Gratiot Ave. Cost, $25,000.

Chicago, Ill.—The Otis Elevator Co. will erect an office building at Jackson Blvd. and Jefferson St., it is reported.

Pontiac, Ill.—Bids were received as follows on Sept. 8, by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., for the construction of a U. S. post-office at Pontiac, Ill.: M. Yeager & Sons, Danville, Va., $88,070; George M. Stiles Construction Co., Danville, Ill., $89,934; James de Vault, Canton, Ohio, $76,944; Interstate Construction Co., Saginaw, Mich., $76,696; Barnes Bros., Logansport, Ind., $93,000; King Lumber Co., Charlottesville, Va., $99,400; Rogers & Kaiser, Chicago, $92,335.

Milwaukee, Wis.—George A. Griebe, Arch., Cleveland, Ohio, has been commissioned by Charles W. Somers of Cleveland, to prepare plans and specifications for the proposed construction work on the site of the present Plankinton block, Grand Ave., West Water and Second Sts. The first unit will be a theatre in the center of the block. Work will begin about Jan. 1. The other units will be a 13-story office building at the West Water St. corner and a hotel at the Second St. corner.

✚Milwaukee, Wis.—The Board of Education has awarded the contract for the concrete and masonry for the Milwaukee School of Trades to STERLING ENGINEERING & CONSTRUCTION CO., at $44,475 and $18,950.

✚Shawano, Wis.—The Shawano County Board of Supervisors awarded the general contract for the construction of the $200,000 county insane asylum and poor house to J. F. WEINBERG CONSTRUCTION CO., Grand Rapids, Wis., at $135,000. Van Ryn & DeGelleke, Milwaukee, Wis., are Archs.

Wellsburg, Iowa.—Bids will be received by the School Board, D. Claassen, Secy., for erecting a 2-story, 4-room brick school, including heating and plumbing, until Sept. 15. Payne & Sons, Carthage, Ill., are the Archs.

***Minneapolis, Minn.**—Bids will be received by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., until 3 p. m., Oct. 31, for the construction (except the mechanical equipment) of the U. S. Postoffice at Minneapolis, Minn. The building is to be of fireproof construction, stone faced, with a ground area of approximately 61,000 sq. ft., one story in height, except the front portion, which is three stories. Drawings and specifications may be had from the custodian of site at Minneapolis, Minn., or at the office of the Supervising Architect.

✚St. Paul, Minn.—HERZOG IRON WKS., St. Paul, were awarded the contract for furnishing the structural steel at $40,000, for the new 5-story reinforced-concrete fireproof addition to the Emporium Department Store at Seventh and Robert Sts. Buechner & Orth, St. Paul, are Archs. Cost, $100,000.

The State Board of Control, P. M. Ringdal, Chn., will receive bids until 2 p. m., Sept. 18, for the construction of addition to the dining hall, to cost $25,000, and addition to the women's dormitory at the State Agricultural College here, to cost $40,000. Plans have been prepared by C. H. Johnston, State Arch., 715 Capital Bk. Bldg.

✚St. Paul, Minn.—The State Board of Control, P. M. Ringdal, Chn., awarded the contract for the construction of a pressed brick and cut stone 3-story girls' dormitory at the Experimental Station at Morris, Minn., to CAMERON & CO., 619 Ryan Bldg., at $35,096. C. H. Johnston, 715 Capital Bk. Bldg., is State Arch.

Lindsborg, Kan.—Bids will be received until Sept. 20 by the Board of Education for the construction of a 2-story and basement, 75 × 80 ft. school building. Plans by Nielsen & Squires, Assoc. Archs., Topeka and Emporia.

✚Omaha, Neb.—The contract has been awarded to SELDEN-BRECK CO. at $200,000 for the erection of Oscar Keeline building.

Jefferson City, Mo.—A commission will be appointed soon with headquarters in Jefferson City to arrange matters pertaining to the erection of a new state capitol building, of marble or granite construction. The approximate cost is $3,500,000. C. W. Thomas is Mayor.

Dallas, Tex.—Plans have been completed by Shepley, Rutan & Coolidge, Archs., Boston, for the erection of the administration building of the Methodist University. The cost of the building is $300,000.

✚Galveston, Tex.—The contract has been awarded to PIERSON & CO., of Houston, for the erection of a $100,000 warehouse on pier B to be erected by the Southern Pacific Co., at Galveston. The warehouse will be 1,000 × 75 ft.

Portland, Ore.—The Pacific Telephone & Telegraph Co., will erect a 10-story, class A, building at Park and Oak Sts. The buildings will cost about $250,000.

Portland, Ore.—A reinforced concrete apartment house will be built by Morgan, Fliedner & Boyce at the site where the Hanover Apartment, on King St., near Washington St., was recently burned. The new building will contain six stories and full basement and will be entirely fireproof. The partitions will be of tile and the floors will be of reinforced concrete. The structure will occupy ground 50 × 100 ft. The exterior will be faced with light-colored pressed brick, with ornamental trimmings. The main entrance on King St. will be finished with marble wainscoting and decorated stucco ceiling. Each floor will have 3-room apartments. Each apartment will have an outside balcony. An automatic electric passenger elevator will be installed. The interior finishings will be entirely of hardwood. The structure will cost $75,000.

San Francisco, Cal.—A. B. Spreckels has taken out a building permit for the erection of a 2-story, Class B, dwelling at Octaria and Washington Sts., at a cost of $200,000.

✚Los Angeles, Cal.—Morgan, Walls & Morgan, Story Bldg., have awarded a contract to BLY BROS. STONE CO., 678 Utah St., for furnishing and setting up all granite in same building, at $92,500.

✚Marie Z. Isaacs has awarded contract to the BARBER BRADLEY CONSTDUCTION CO., 1824 East 15th St., for the construction of a 5-story concrete store and loft building, 42 × 112 ft. Amount, $47,931.

✚The ALTA PLANING MILL CO., 830 McGarry St., secured the contract for erecting a 3-story concrete and plaster hotel, 323 × 60 ft., with two 4-story wings, 100 × 116 ft., and 75 × 150 ft. respectively, at Beverly Hills for the Rodeo Land & Water Co. The structure will cost $194,000. Elmer Grey, Wright and Callender Bldg., is the Arch.

✚JOHN W. MORRISON and ROBERT DEWAR, Builders Exchange, San Francisco, secured the contract at $80,000 for the construction of the 4-story office and warehouse building for Blake, Moffitt & Towne on So. Los Angeles St.

Sarnia, Ont.—Bids will be received until 4 p. m., Sept. 20, by R. C. Desrochers, Secy. Dept. Pub. Wks., Ottawa, for the construction of an armory. Plans and specifications may be seen at the office of Thomas A. Hastings, Clk. of Wks., Postal Station F, Younge St., Toronto.

Toronto, Ont.—Bids will be received by the Chairman of Building Com., Toronto, until Sept. 23, for the various trades required in the erection and completion of private patients and obstetrics building in connection with proposed hospital. Plans by Darling & Pearson, 2 Leader Lane.

Calgary, Alta.—Bids will be received until Sept. 18 by R. C. Desrochers, Secy. Pub. Wks. Dept., Ottawa, for the construction of an immigration building. Plans, specifications and form at office of J. E. Cyr, Supt. of Public Bldgs., Winnipeg.

WATER SUPPLY—IRRIGATION.

(*✚Denotes a contract awarded.*)

✚Fort Levett, Me.—The contract for constructing reservoir and tanks at Fort Levett has been awarded to N. E. REDLON CO., Portland, at $6,251. Noted Sept. 7.

Boston, Mass.—Bids will be received by Public Works Department for laying 3,600 lin. ft. of water pipe in various streets of the city. Louis K. Rourke is Com. of Pub. Wks.

✚Newton, Mass.—The contract for a concrete well, 28 ft. in diameter by 38 ft. deep, has been awarded to T. STUART & SON CO., at $8,900.

Churchville, N. Y.—The village is considering the installation of a waterworks system to cost approximately $20,000.

New York, N. Y.—Bids will be received by Henry S. Thompson, Comr. Water Supply, Gas and Electricity, until 2 p. m., Sept. 20, for furnishing, delivering and laying water mains and appurtenances and removing and relaying water mains and appurtenances in Jerome Ave., Boro. of the Bronx.

Bids will be received by Charles B. Stover, Pres. of Park Board, until Sept. 21 for completing a brick drain and constructing inlet basin in Van Cortlandt Park.

New York, N. Y.—We are officially advised that bids for constructing the Brooklyn conduit, a portion of the Catskill Aqueduct, were received Aug. 1 as follows: W. F. Donovan and Charles Cranford, 186 Remsen St., Brooklyn, N. Y., $366,014; J. F. Cogan Co., 280 Broadway, New York, $439,440; the Degnon Contracting Co., 60 Wall St., New York, $441,195; James H. Holmes, 87 Nassau St., New York, $488,267; Booth & Flinn, Ltd., 1942 Forbes St., Pittsburgh, Pa., $497,515; Donlon Contracting Co., 84 Broadway, Brooklyn, New York, $519,116; Patrick McGovern, 6 Beacon St., Boston, Mass., $528,735; Cranford Co., 52 Ninth St., Brooklyn, N. Y., $584,515. Noted July 20.

Gettysburg, Pa.—The Gettysburg Water Co. will install a new filtration plant to cost $30,000.

Allentown, Pa.—Bids will be received by Col. H. C. Drexler, Chn. of the Homeopathic State Hospital for the Insane near Allentown, until [illegible] p. m., Sept. 19, for the construction of reservoirs, receiving basin, furnishing pumps and furnishing and laying cast iron pipe, valves and special castings, etc., for water supply.

Charlotte, N. C.—The city has sold bonds to the value of $300,000 for water works extension.

Dillon, S. C.—The city has voted bonds as follows: $38,000 for water improvements, $39,000 for sewerage and $3,000 for lighting.

✚Thomaston, Ga.—The contract for constructing a water-works and sewer system has been awarded to C. W. MURRAY & CO., Fort Valley, Ga., at $45,000. Noted July 13.

✚Louisville, Ky.—The contract for constructing Dam No. 48 on the Ohio River has been awarded to the OHIO RIVER CONTRACT CO., Evansville, Ind., at $1,397,400.

West Covington (Covington post-office), **Ky.**—Bids will soon be received by the City Council for installing water mains and branches. R. L. Kinney is City Clk.

✚New Lexington, Ohio.—The contract for constructing a system of waterworks in New Lexington has been awarded to the NATIONAL CO., South Bend, Ind., at $44,000.

✚Oakley (Cincinnati post-office), **Ohio.**—The contract for laying 6-in. water pipe with the necessary appurtenances, from 30th to 33d St., has been awarded to M. F. QUILL, Tribune Bldg., Cincinnati.

✚*Cleveland, Ohio.—We are officially advised that the contract for wooden protection crib No. 5, for the proposed West Side tunnel extension, has been awarded to the GREAT LAKES DREDGE & DOCK CO., Cleveland, at $118,000. Noted Aug. 17.

East Liverpool, Ohio.—Bids will be received by C. V. Beatty, Dir. Pub. Ser., until noon, Sept. 15, for improving, furnishing and providing the supplies, material and labor for drilling and equipping not to exceed 20 wells. Plans are on file at the office of Chester & Fleming, Union Bank Bldg., Pittsburgh, Pa.

Clinton, Ind.—Bids are being received by the Clinton City Water Works for constructing a 16-in. suction water pipe system. W. R. Paige, Rose Dispensary Bldg., Terre Haute, is Engr.

Lafayette, Ind.—Bids will be received by the City Clerk until Sept. 28 for constructing a reinforced-concrete reservoir, 75 ft. diameter, 10 ft. deep.

Farmington, Ill.—Bids will be received by James D. Findlay, City Clk., until 8 p. m., Sept. 18, for constructing a reservoir for the water-works system.

Lyons, Ill.—See item under Streets and Roads.

Fond du Lac, Wis.—Bids will be received by E. W. Clark, Pres. Bd. of Trustees, until noon, Sept. 28, for drilling a water-producing artesian fountain on the county asylum grounds.

Milwaukee, Wis.—The Committee on Water-Works of the Common Council has voted to recommend the appropriation of $6,000 to make test borings preliminary to the construction of a new intake at the foot of Linwood Ave. to a crib 4,000 ft., out in Lake Michigan. J. R. Mesiroff is City Engr.

Bids are being received by the Department of Public Works for furnishing and laying drains and water service connections on Superior St., from South Bay St. to Russell Ave. Harry E. Briggs is Comr. Pub. Wks.

Bids are being received by Theodore B. Olsen, Village Clk., East Milwaukee, for furnishing and laying 6-in. water main, hydrants and connections, amounting to about 2,000 ft.

Lost Nation, Iowa.—Bids will be received by A. L. Cook, Town Clk., until Sept. 21, for constructing an air pressure water system, with about two miles of mains. The Iowa Engineering Co., Clinton, Iowa, are Engrs. Noted Aug. 24.

Boone, Iowa.—Bids are being received by the City Clerk for constructing two water mains.

Creston, Iowa.—The city has voted to issue bonds for $10,000 for the installation of a water-works plant.

Pierson, Iowa.—Plans are being prepared by the Lytle Construction Co., Sioux City, for the construction of a water-works system.

Pisgah, Iowa.—The city is considering the construction of a water-works system.

✚Eveleth, Minn.—The contract for the installation of water mains on Hayes St. has been awarded to the PASTORET-LAWRENCE CO., Duluth, at 61 cts. per ft. for 4-in. pipe; $19.50 each for hydrants; 5 cts. per lb. for specials; $9 per cu. yd. for rock excavation, and $1 per cu. yd. for earth.

✚Shakopee, Minn.—The contract for sinking a deep well, laying water mains and erecting a stand pipe has been awarded to J. G. ROBERTSON, St. Paul, at $8,452.

Sylvan Grove, Kan.—Bids will be received by W. H. Breihan, City Clk., until 2 p. m., Sept. 15, for constructing a municipal water and electric light system.

+Benedict, Neb.—The contract for constructing a water-works system has been awarded to the ALAMO ENGINE & SUPPLY CO., Omaha, at $9,999. Noted Aug. 17.

+Bridgeport, Neb.—The contract for constructing water-works has been awarded to C. A. NEWBERRY, Alliance, at $10,092.

Ashley, N. Dak.—Bids will be received by John Wildenbrand, Village Clk., until Sept. 20, for constructing a town well.

Mott, N. Dak.—Plans are being prepared for a system of water-works at an estimated cost of $8,000.

Grand Forks, N. Dak.—Bids will be received by Charles J. Evanson, City Audr., until 5 p. m., Sept. 22, for constructing water mains Nos. 74, 70 and 73.

Fargo, N. Dak.—Bids for constructing a pumping station and electric light plant have been received as follows: T. G. Robertson, St. Paul, $49,425; James Kennedy, Fargo, $48,000. Noted Aug. 31.

Terry, Mont.—Bids will be received by Ray L. Kampf, Town Clk., until Sept. 26 for constructing three concrete cisterns.

+Manhattan, Mont.—We are officially advised that the contract for constructing a water-works system has been awarded to LINSTRAN & OWEN, Billings, at $19,757. Other bids were: J. L. Penson, $22,024; Katz & Craig, $23,589; R. M. Bardson & Co., $20,871; D. J. Fresway, $20,187; W. D. Lovell & Co., $21,110; F. Beley, $22,759; Werdner & Rich, $20,940; A. C. Wans, $22,547. Noted Aug. 17.

St. Ignatius, Mont.—We are officially advised that bids for the construction of the Pablo dams and canals on the Flathead Project were received Aug. 25, as follows: (a) Class A; (b) Class B: Lynn & Arnoldos, Lovell, Wyo., (a) $19,000, (b) $19,000; J. W. McNeil, North Platte, Neb., (a) $25,175, (b) $25,175; Nelson Rich, Prosser, Wash., (a) $115,693, (b) $116,093, bid on work complete; S. P. King, Helena, Mont., (a) $25,925, (b) $25,925; Winston Bros., Minneapolis, Minn., (a) $129,874, (b) $129,474; J. E. Hilton, Manhattan, Mont., (a) $22,625, (b) $22,625. Noted Aug. 3.

+*Kansas City, Mo.—The contract for installing water tube boilers at the Turkey Creek and Quindaro pumping stations has been awarded to the ENGLISH TOOL & SUPPLY CO., at $29,610. Noted Aug. 17.

Montgomery, Mo.—Bids will be received by the City Clerk until Sept. 18, for constructing water-works. Fuller Coult Co., Chemical Bldg., St. Louis, Mo., are Engrs.

Houston, Tex.—The Rio Grande Deveolpment Co. has been formed here for the purpose of constructing a system of irrigation in the lower Rio Grande valley. The capital stock is $10,000. Incorporators are L. M. Matthews, W. G. Buckner and T. E. Cowart.

Brownsville, Tex.—All bids for the construction of a drainage system to embrace 85,000 acres near Brownsville, received Aug. 30, by the Drainage Commissioners, were rejected. New bids will be received Oct. 3.

Jourdanton, Tex.—T. H. Zanderson, San Antonio, Walter Avant, Jourdanton, and associates will install a water-works plant and distributing system at an aproximate cost of $15,000.

Timpson, Tex.—The city has voted $20,000 bonds for water-works construction.

Brady, Tex.—The city has voted to issue bonds for $40,000, for a water-works system.

Eagle Pass, Tex.—Press reports are to the effect that plans have been prepared for a dam 100 ft. high by 600 ft. long, across Devil's River, to supply water for the irrigation of 156,000 acres of land in McKinney, Valverde and Maverick Counties. D. R. Chapin, Brownsville, is interested.

***Haileyville, Okla.**—Bids will be received by the Town Clerk, until 4.30 p. m., Sept. 25, for purchasing 2,000 ft. of 4-in. Class B c.-i. pipe; 1,500 ft. 4-in. Class C; 1,600 ft. 6-in. Class B; 1,000 ft. 6-in. Class C; 500 ft. 8-in. Class C. One 500-gallon, single acting triplex pump, direct connected to one 50-HP. electric motor; 15 standard fire hydrants and 12 valves. Plans are on file at the office of O'Neil Engineering Co., 1508 Praetorian Bldg., Dallas, Tex.

+Soper, Okla.—The contract for constructing a water-works system has been awarded to N. S. SHERMAN. The estimated cost is $13,000.

Tucumcari, N. Mex.—The city has taken steps to erect a fire house and a 100,000-gallon steel tower.

The Canadian & Ute Creek Oil, Land & Irrigation Co. will drill a deep well near Tucumcari, for the purpose of developing water for irrigation.

Deming, N. Mex.—The Land Vineyard Co. will install a 1,500-gallon pump at a well upon its land near here for the purpose of affording a water supply for irrigation.

Uvalde, Tex.—The Byrd Land & Cattle Co. will construct a system of irrigation on Turkey Creek, near here. The plans involve the dredging of a canal from the Nueces River to Turkey Creek, a distance of nine miles. A reinforced-concrete dam will be built across Turkey Creek and a reservoir formed that wil cover from 4,000 to 5,000 acres. It is estimated that the water supply contained in this storage reservoir will be sufficient to irrigate about 60,000 acres. The surveys for the project are now being made.

Asotin, Wash.—The town has voted to issue bonds for $35,000 for installing a modern water-works system.

Centralia, Wash.—Tentative plans have been prepared for constructing a water system to be owned and operated by the citizens. Estimated cost is $115,000.

Grandview, Wash.—Plans have been prepared for a complete water system for Grandview. Estimated cost is $20,000.

Brawley, Cal.—Bids will be received by W. H. Whelan, City Clk., until 8 p. m., Sept. 18, for operating and maintaining a system of irrigation ditches.

Sisson, Cal.—The city has voted to issue $45,000 of bonds for constructing municipal water and sewer systems.

+Coranado Beach (Coranado postoxce), **Cal.** — The contract for furnishing 16-in. c. i. water pipe and fittings for improving the water system has been awarded to HAZARD-GOULD CO., Birmingham, Ala., at $135,000.

+*Burnaby, B. C.—The contract for laying water pipe has been awarded to W. A. KENNEDY, West Vancouver, at $94,952.

SEWERAGE.

(**Denotes that this work is advertised in Engineering News.*)

New Bedford, Mass.—We are officially advised that bids for constructing the 60-in. c.-i. pipe outfall of the intercepting sewer system, were received on Sept. 6, as folows: (a) with distributor, a section of the outfall made up of 10-in. branches, furnishing 22 outlets, with a 24-in. outlet at the extreme end of the pipe; (b) alternative, a single 60-in. outlet: T. A. Scott Co., Inc., New London, Conn., (a) $119,085; (b) $102,446. Merritt & Chapman Derrick & Wrecking Co., New York, (a) $125,735; (b) $98,687. Hiram A. Phillips, Quincy, Mass., (a) $108,948; (b) $98,070. Patrick McGovern, (a) $103,332; (b) $98,624. William H. Flaherty, New York, (a) $79,817; (b) $69,542. The pipe and special castings will be furnished by the city. William F. Williams is City Engr.

Buffalo, N. Y.—The City Council has ordered the construction of a 15-in. tile sewer in Washington St., between Swan and Seneca Sts.

Saratoga Springs, N. Y.—Bids will be received by the Sewer, Water and Street Commission until 3 p. m., Sept. 14, for furnishing all material and constructing an 8-in. sewer through Church St., from Van Rensselaer St. west to the corporation line, together with 6-in. laterals from main sewer to curb lines and one manhole and lamp hole. Clarence Bird is Clk.

+Yonkers, N. Y.—We are officially advised that the contract for constructing the first section of the Nepperhan Valley sewer, was awarded on Sept. 5 to McDONALD & MURRAY, 135 Woodland Ave., Yonkers, at $103,839. The other bidders were: O'Rourke Contracting Co., $104,480; Molloy & Murray, $130,981; N. Mangini, $115,080; J. Canepi, $112,500; Kelly & Hanifin, $119,800; Joseph Cuozzo, $108,202. Noted Aug. 31.

Connellsville, Pa.—Chester & Fleming, Consult. Engrs., Pittsburgh, have been called into consultation by J. B. Hogg, City Engr., of Connellsville, with reference to preparing plans for a sewerage disposal plant for the Borough of Connellsville.

+Clinton, S. C.—The contract for constructing a system of sanitary sewers has been awarded to DOLES & MYERS, Meridian, Miss., at $27,193. Noted Sept. 7.

Dillon, S. C.—See item under Water Supply-Irrigation.

Rockhill, S. C.—Bids will be received by the Sewerage Commission, J. B. Johnson, Chn., until noon, Sept. 25, for constructing three sewage disposal plants near the city. The work will include three Imhoff tanks, two sprinkling filters, 70 × 158 ft., one contact bed, 76 × 150 ft., three sludge beds, dosing tanks, etc. T. W. Cothran is Engr. for the Comn. Plans and specifications are on file with Hering & Gregory, 170 Broadway, New York.

Thomaston, Ga.—See item under Water Supply-Irrigation.

***Auburn, Ala.**—Bids will be received by the Town Council until 8 p. m., Sept. 25, for constructing 2,750 ft. of 8-in. and 4,650 ft. of 6-in. sanitary sewers. R. W. Burton is Town Clk.

Clarksdale, Miss. — We are officially advised that the lowest bid received on Sept. 5 for water and sewer works was submitted by I. C. Mishler, 514 McCallie Ave., Chattanooga, Tenn., at $20,336, for sewers, and $7,200 for water-works. W. S. Bobs is Engr.

Lake Charles, La.—Bids will be received by the Commission of the First Sewerage District until 2 p. m., Sept. 18, for about 27 miles of pipe sewers, four reinforced-concrete tanks, pumping station, two centrifugal pumps, two motors, or two gasoline engines, c.-i. pipe, and usual accessory construction. Walter G. Kirkpatrick, Jackson, Miss., is Engr. Noted Aug. 3.

Louisville, Ky.—The Board of Public Works is considering the construction of a 54-in. concrete sewer on M St., from Seventh to Fourth Sts., continuing to Third St. with a 30-in. pipe sewer. It is estimated that the improvement will cost $40,000. Marshall W. Neal is Chn. Bd. Pub. Wks.

Cincinnati, Ohio.—Preliminary plans are being prepared for constructing a sewerage system along Eastern Ave., to cost approximately $150,000. F. H. Shipley is City Engr.

East Liverpool, Ohio.—Bids will be received by C. V. Beatty, Dir. Pub. Ser., until noon, Sept. 15, for constructing sanitary sewers in various streets.

Jasper, Ind.—The town is considering the construction of a sewer system composed of 8, 10 and 12-in. pipe.

+Galveston, Ind.—We are officially advised that bids for constructing two sanitary sewer systems were received on Sept. 6, as follows: LEE & EVERROAD, Columbus, Ind., $5,756 (awarded contract); T. B. Ruddell Kokomo, Ind., $6,300. Noted Aug. 24.

Chicago, Ill.—Bids will be received by Edward J. Glackin, Secy. Bd. Local Impvts., until Sept. 18, for constructing sewers.

Lyons, Ill.—Bids will be received by the Board of Local Improvements until 8 p. m., Sept. 14, for the construction of a sewer and water system. F. L. White, Lyons, Ill., and Edwin Hancock, Engr., Monadnock Block, Chicago, Ill., will furnish bid blanks.

***Rockford, Ill.**—Bids will be received by W. W. Bennett, Pres. Bd. Local Impvts., until 1.30 p. m., Sept. 19, for constructing sewers in various streets, estimated at $40,000. Plans and specifications will be furnished upon application to the City Engineer of the City of Rockford.

Milwaukee, Wis.—Bids will be received by H. E. Briggs, Comr. Pub. Wks., until Sept. 18, for constructing house drains and water service connections on Lapham St., from 23d Ave. to 26th Ave., and on 14th St., from Concordia Ave., to Davis St.

Wauwatosa, Wis.—Bids will be received by Martin Plehn, County Clk., Millwaukee, until Sept. 16, for building a sewer in the extension of Grand Ave., west of the new Grand Ave viadust in the town of Wauwatosa.

Dubuque, Iowa.—Bids will be received by Otto P. Geiger, City Recorder, until 8 p. m., Sept. 14, for constructing 8,780 lin. ft. of 8-in. tile pipe, 2,892 lin. ft. of 10-in. tile pipe, and 29 manholes.

Logan, Iowa.—Bids will be received by the City Council until 1 p. m., Sept. 18, for sewer construction, according to plans on file with the City Clerk.

Mason City, Iowa.—Plans have been submitted to the Sewer and Sanitary Committee of the City Council for a sanitary sewer system, to cost approximately $36,000. F. M. Norris is Mayor.

Wapello, Iowa.— We are officially advised that bids for constructing 4,505 ft. of sewer have been received as follows: D. C. Armstrong, Sioux City, Iowa, $1.84 per ft.; Blackhawk Construction Co., Waterloo, Iowa, $1.98; W. A. Edgar, Cedar Rapids, Iowa, $1.70; George Peterson, Burlington, Iowa, $1.95; August Korneman & Co., Muscatine, Iowa, $1.73; E. T. Sykes, Minneapolis, Minn., $1.99; Burlington Construction Co., Burlington, Iowa, $1.81; Cook Construction Co., Des Moines, Iowa, $1.90.

West Union, Iowa.—Bids will be received by J. O. Elwing, City Clk., until noon, Sept. 14, for constructing 7,485 lin. ft. of sewers, including septic tanks and flush tanks.

Winona, Minn.—Bids will be received by the City Council until Sept. 18, for the construction of a storm water sewer on Broadway, from Center to Johnson Sts., in accordance with plans and specifications prepared by H. B. Walling City, Engr.

+Wichita, Kan.—We are officially advised that bids for constructing Sanitary Sewer No. 20 were received on Sept. 5, as follows: JOHN STRIFFLER, Wichita, Meriwether patent, lock joint reinforced-concrete pipe, $173,475 (awarded contract); vitrified brick, $201,925; Parmley concrete, $171,659. Rushmore & Gowdy, Hutchinson, Kan., Meriwether concrete, $178,788; Cathroe & Fitch, Wichita, vitrified brick, $210,322; concrete, $181,408. Hall Contracting Co., Clinton, Mo., Wilson pipe, $169,149. H. J. McNichols, Chicago, Ill., vitrified brick, $182,459; Meriwether concrete, $199,240; Parmley concrete, $192,761; Deiter & Wenzel, Wichita, concrete, $201,343. Bert C. Wells is City Engr. Noted Aug. 31.

+Other contracts were awarded this time, as follows: the extension of the Wichita drainage canal and storm sewer from Zimmerly St. to the Big Arkansas River, to the POLLARD-CAMPBELL DREDGING CO., Omaha, Neb., at 9½ cts. per cu. yd. for excavation; total $22,088.

+A drainage ditch from the intersection of the right branch of Chisholm Creek and 21st St. to the Wichita Drainage Canal, about 300 ft. south of 19th St., to the WICHITA CONSTRUCTION CO., at 18 cts. per cu. yd. for excavation; total, $2,740.

+A reinforred-concrete bridge across the extension of the Wichita Drainage Canal at Harry St., to DEITER & WENTZEL, Wichita at $3,087.

+Paving the right-of-way of the Wichita R. R. & Light Co. on Franklin Ave., from Nims to Buffum Ave., to the CLEVELAND TRINIDAD PAVING CO., at $2.35 per sq. yd. for paving and 45 cts. per cu. yd. for excavation.

+For paving the right-of-way of the Wichita R. R. & Light Co., on Douglas Ave., from Main to Wichita St., to JOHN RITCHIE & SONS, at $2.35 per sq. yd. for brick paving and 45 cts. per cu. yd. for excavation.

Madison, S. Dak.—Bids will be received by the City Council until Oct. 5, for constructing a sewage disposal plant. William Rae is City Audr.

Doniphan, Mo.—We are officially advised that Frank L. Wilcox, Chemical Bldg., St. Louis, is preparing plans for a sanitary sewer system for Doniphan.

Montgomery City, Mo.—Bids will be received by the City Clerk until Sept 18, for constructing 5,500 ft. 8-in. vitrified clay pipe sanitary sewer, two flush tanks, two septic tanks, twelve manholes, two drop manholes and two lamp holes. Fuller-Coult Co., Chemical Bldg., St. Louis, are Engrs.

+Prescott, Ark.—We are officially advised that the contract for 25,500 cu. yds. of excavation, 49,000 lin. ft. of sewer pipe, 120 manholes and a sewer treating bed, was awarded on Sept. 6 to HAMILTON BROS., at $20,196. James W. Beebe is Engr. in Charge.

Las Cruces, N. Mex.—The city has voted bonds for $75,000 bonds for constructing a sewer system and water-works plant.

+Anaheim, Cal.—The City Trustees have awarded a contract to CHAMBERLAIN, WILLIAMSON & CHAMBERLAIN, 998 East Union St., Pasadena, for constructing the municipal sanitary sewer system at $26,500. The PACIFIC SEWER PIPE CO., Los Angeles, was awarded the contract at $14,963 for the pipe.

STREETS AND ROADS.

(**Denotes that this work is advertised in Engineering News.*)

+Rockland, Me.—We are officially advised that bids for widening and paving Sea St. have been received as follows: D. F. GRIFFIN & BRO., Portland, Me., $19,024 (awarded contract); Harrison & Burton, New York City, $19,100; Coleman Bros., Boston, Mass., $19,430; John Gullian, Portland, Me., $21,940; Booth Bros., Hurricane Island, $29,500. Noted Aug. 10.

Manchester, N. H. — The Common Council is considering street and highway improvement to cost $30,000.

Marblehead, Mass. — Bids for construcing Section 2 of the proposed road improvement have been received as follows: Charles E. Pinkham, South Lawrence, $10,214; M. McDonough, $11,060; J. Linean, $12,550.

Boston, Mass.—Bids will be received until Sept. 18, by Public Works Department for constructing a tar macadam roadway in Bradfield St., West Roxbury. Louis K. Rourke is Comr. of Pub. Wks.

+Boston, Mass.—The contract for constructing a tar macadam roadway in Bay St., Dorchester, was awarded on Sept. 5, to F. S. & A. D. GORE at $7,355. Other bids were James Doherty, $7,538; Wm. J. Rafferty Co., $7,705; D. E. Lynch, $9,161.

+Boston, Mass.—The contract for constructing artificial stone sidewalks in Thetford Ave., Dorchester, was awarded on Sept. 6, to the ADAMS POND CO., at $5,058. Other bids were James Doherty, $5,250; Warren Bros. Co., $5,318; John T. Shea, Jr., $5,430; Wm. J. Rafferty Co., $5,693; Jeremiah J. Sullivan, $5,703; D. E. Lynch, $6,408. Louis K. Rourke is Comr. Pub. Wks.

+Worcester, Mass. — Bids for paving Pleasant St. from Newton Square to Lenox St. have been received as follows: HASSAM PAVING CO., $26,140 (awarded contract); George W. Carr Co., $26,524.

Narragansett Pier, R. I.—Bids for grading ground adjacent to the Commandant's Quarters, Naval Station, Narragansett Bay, were received on Sept. 2 by the Bureau of Yards and Docks, Navy Department, as follows: R. L. Whipple & Co., 306 Main St., Worcester, Mass., item 1 $1,037, 2a $2 per yd, 2b 2 cts. per sq. ft., 2c $35; Patrick H. Welch, Lee's Wharf, Newport, R. I., item $80, $570, $300, $10.

Hartford, Conn.—Bids will be received by the State Highway Commission until 2 p. m., Sept. 21, for the construction of a section of macadam road in Main St., Old Lyme, Conn.

Troy, N. Y.—Bids are asked by Board of Contract and Supply, for paving, regulating, curbing and grading Frear Ave., from Oakwood Ave., about 400 ft. west. James M. Riley, is Secy.

Albany, N. Y.—Bids will be received by the Board of Contract and Supply until 3 p. m., Sept. 18, for the improvement of Myrtle Ave., from Quail to Ontario St.

Buffalo, N. Y.—The City Council has ordered the paving of the following: Weyand St., 22 ft. wide, brick to Frank Ave., Monroe st., 26 ft. wide, asphalt, between Brown and Genesee Sts.; Warren Ave., 28 ft. wide, asphalt, between Broadway and Kent St.; Krupp St., 28 ft. wide, asphalt, from Ashley St. to end of street; Austin St., 28 ft. wide, asphalt,, from Military Road to New York Central R. R. Viaduct.

***Cohoes, N. Y.** — Bids will be received by the Common Council until 8 p. m., Sept. 19, for paving Van Rensselaer St., from Pine to Oneida St. The work consists of 2,515 sq. yds., of pavement, and 1,237 lin. ft. of granite curb. Wm. J. Elliot is City Clk. and Geo. T. Bolton, City Engr.

✚Larchmont, N. Y.—We are officially advised that the contract for constructing five miles of concrete sidewalk was awarded on Sept. 6, to DAILY & MERRITT, Port Chester, N. Y., at 18 cts. per sq. ft.

New York, N. Y.—Bids will be received by Alfred E. Steers, Pres. Boro. Brooklyn, until 11 a. m., Sept. 20, for grading, paving, laying sidewalks, etc., on various streets.

New York, N. Y.—Contracts for highway improvements have been awarded by Lawrence Gresser, Pres. Boro. Queens, as follows: Flushing and Astoria Road from Old Bowery Bay Road to Jackson Ave., Newtown, 2½ miles, THOMAS M. HART, $26,540. Hempstead and Jamaica Turnpike, town of Jamaica, from Harvard Ave., village of Jamaica, to Nassau County line, 3 miles, UVALDE CONSTRUCTION CO., $46,087. Central Ave., town of Jamaica, from the Merrick Road, Springfield, to the Nassau County line, 2 miles; CONTINENTAL PUBLIC WORKS CO., $28,749.

Elizabeth, N. J. — Tentative plans have been prepared for paving Elizabeth Ave., and Broad, East Jersey and First Sts., at an approximate cost of $884,875.

Trenton, N. J.—Bids will be received by the Board of City Commissioners until 10 a. m., Sept. 15, for paving various streets. Harry B. Salter is City Clk.

✚West New York, N. J.—We are officially advised that the contract for constructing 5,000 sq. yds. of asphalt block pavement on 22d St. was awarded on Sept. 5, to the HASTINGS PAVEMENT CO., 25 Broad St., New York. Carl Griesbach is Engr.

✚Woodbury, N. J.—The contract for building the Mantua Grove-Mickleton stone road has been awarded to the NEWTON CONSTRUCTION CO., at $43,079.

✚Berlin, N. J.—A contract for constructing a gravel road between Berlin and Gibbsboro has been awarded to McCULLOUGH & CONNORS, Philadelphia, Pa., at $9,309. The other bids were W. Penn Corson, $9,946; Le Cato oCnstruction Co., $10,288.

East Brady, Pa. — Bids will be received by the Borough of East Brady, George E. Henry, Pres., until 8 p. m., Sept. 20, for constructing concrete walks according to specifications on file with the President.

✚Greensburg, Pa. — A contract for grading and paving 4.7 miles of road between Latrobe and Derry, has been awarded to RHINEHART BROS., at approximately $120,000.

✚Pittsburgh, Pa.—The Department of Public Works has awarded contract for grading, paving and curbing Benton Ave., North Side, to BOOTH & FLYNN, at $22,000.

Rochester, Pa.—Bids will be received by the Town Council of the Borough of Rochester until 7.30 p. m., Sept. 18, for paving New York Ave., from Brighton Ave. to Jefferson St., and Center St., from Water to Harrison St. Specifications and blanks for bidding may be obtained at the office of J. P. Leaf, Boro. Engr. James W. Doncaster is Secy. of Council.

Verona, Pa.—Bids will be received by the Borough of Verona at the Town Hall, until 8 p. m., Sept. 14, for grading South Ave. from Front to Fourth St, approximately 11,500 cu. yds. Plans and specifications can be seen at the office of Frease & Sperling, Boro. Engrs., Carl Bldg., Wilkinsburg, Pa.

✚Wilmington, Del.—Bids for road construction have been received by the New Castle County Levy Court, as follows:

Kennett Square Road, John F. O'Neal, $29,500; CORNELIUS MUNDY, $24,433 (awarded contract).

Clayton Road, Stewart and Donohue, $12,641; Horrigan Contracting Co., $12,837; JUNIATA PAVING CO., $12,141, (awarded contract).

Philadelphia and Baltimore turspike, Horrigan Contracting Co., $19,225; Stewart and Donohue, $19,218; THOMAS J. ALLEN, $18,921 (awarded contract).

Newark and Elkton Road, White Clay Creek, STEWART & DONOHUE, $7,972, (awarded contract); Patrick J. Mundy, $7,235; Juniata Paving Co., $8,810; Horrigan Contracting Co., $7,953; Thomas J. Allen, $8,151.

Pencader hundred section, STEWART & DONOHUE, $11.241 (awarded contract); Patrick J. Mundy, $12,267; Horrigan Contracting Co., $11,373; Thomas J. Allen, $11,229; Juniata Paving Co., $11,149.

✚Washington, D. C.—A contract for improving the grounds of the Pan-American Building has been awarded to NORCROSS BROS. & CO., Worcester, Mass., at $100,000.

Lynchburg, Va.—The Council Committee on Streets is preparing a report on proposed street improvements, and is expected to recommend $650,000 bond issue for constructing a reinforced-concrete bridge over James River.

Wheeling, W. Va.—Bids for completing the Top Mill Road have been received as follows: Alexander Gibson Set No. 1, $39,974.95; excavation, per cu. yd, 9 cts.; concrete masonry per cu. yd., $4.90; paving, per sq. yd., $1.07; 24-in. curb, per ft. 25 cts.; 18-in. curb, per ft., 35 cts.; rubble masonry, per cu. yd., $2. Set No. 2, $30,368. Item bids were the same as under Set. No. 1, with exception that no rubble masonry is included and an 18-in. curb specified. Jacovetty & Koehnline, Set No. 1, $44,785; $1; $4.95; $1.25; 54 cts.; 45 cts.; $1.50. Set No. 2: $38,000; excavating per cu. yd:. $1; concrete masonry per cu. yd., $4.98; paving, per sq. yd., $1.25; 18-in. curb, 45 cts. per ft.

***Burlington, N. C.**—Bids will bbe received by the Street and Sidewalk Committee of the City of Burlington, until 3 p. m., Sept. 28, for improving streets. The work will consist of about 20,000 sq yds. bituminous macadam (penetration method); 15,000 sq. yds. concrete sidewalks; 5,000 lin. ft. combined concrete curb and gutter; and 25,000 cu. yds. of grading. Plans, profiles, specifications, etc., will be on file at the office of J. H. Freeland, Mayor, and Gilbert C. White, Charlotte, N. C., City Engr., and copies of the specifications, form of proposal, etc., may be obtained from the Engineer after Sept. 16.

Palatka, Fla.—Bids will be received by the City Council until Oct. 3, for approximately 15,000 sq. yd. brick paving 4.8 miles shell or gravel paving, and 18,000 lin. ft. curbing.

Jacksonville, Fla. — Bids for paving Bay St., from Market to Bridge St., have been received as follows: Alabama Paving Co., $1.62 per sq. yd.; Georgia Engineering Co., $1.65; Engineering & Paving Co., Jacksonville, $1.58.

Caldwell, Ohio.—Bids will be received by the Council of the Village of Caldwell, until noon Oct. 10, for the improvement of the Caldwell and Belle Valley road. Plans and specifications on file with Hugh F. Neuhart, Vil. Clk.

✚Canton, Ohio—The contract for paving North Rcx St. has been awarded to PRESLEY S. CAMPBELL at $7,026.

Cincinnati, Ohio.—Bids will be received by the Board of County Commissioners until noon, Oct. 6, for improving the Burnt School House Road, from Lincoln Ave. to Blue Rock pike, in Green and Colerain Townships, according to plans and specifications on file in the office of the Board of County Commissioners. Fred. Dreihs is Clk.

Cleveland, Ohio.—Bids will be received by the Board of Commissioners of Cuyahoga County, until 10 a. m., Oct. 7, for grading, draining and improving Fenkell and Solon Road, in accordance with the form of contract and specifications to be furnished by Frank R. Lander, County Survey. John F. Goldenbogen is Clk.

✚Dayton, Ohio.—The County Commissioners have awarded the contract for macadamizing the Covington pike for 1⅛ miles through Englewood to BAKER & YORK, Greenville, at $12,824.

East Liverpool, Ohio.—Bids will be received by C. V. Beatty, Dir. Pub. Ser., until noon, Sept. 15, for improving various streets.

Medina, Ohio.—Bids will be received by the Commissioners of Medina County, until 1 p. m., Sept. 26, for grading and macadamizing one mile of road in Medina and Brunswick Townships, estimated at $9.525. Specifications, plans and profiles are on file in the office of the County Commissioners in Medina, Ohio, and at the State Highway Department.

Middletown, Ohio.—Bids will be received by the Director of Public Service until noon, Sept. 22, for furnishing all labor and material required for the improvement of Christel Ave., from Stanley to Sutphin Ave. by paving the roadway with bitulithic or bituminous macadam accordoing to the plans, specifications, and profiles on file in the office of the Director. John Kunz is Clk.

Mt. Vernon, Ohio.—Bids will be received by the Commissioners of Knox County, Ohio, until 1 p. m. Sept. 25, for grading and macadamizing 6 miles of road in Hilliar Township, estimated at $4,921. Specifications, plans and profiles are on file in the office of the County Commissioners, at Mt. Vernon, and at the State Highway Department.

New Lexington, Ohio.—Bids will be received by the Commissioners of Perry County, until 11 a. m., Sept. 16, for grading and paving with brick 1.13 miles of road in Pike Township; estimated cost, $16.224, and one mile of road in Pike and Clayton Townships, estimated cost $9,270.

✚Norwalk, Ohio.—A contract for constructing two miles of stone road in Wakeman Township has been awarded to THOMAS BURTON & SON, Wellington, Ohio, at $8,200.

✚Sandusky, Ohio.—We are officially advised that contracts for paving have been received as follows: Huron Ave. and Taylor St., to the ANDREWS ASPHALT PAVING CO., Hamilton, Ohio, at $16,846, and $14,641, respectively; Jackson St., to M. J. CALLIN, Sandusky, at $4,578.

✚Woodsfield, Ohio.—The contract to build the Eastern Road has been awarded to LEWIS H. NIXON, Nelsonville, Ohio, at $18,499. The other bids were as follows: Moore & Strahl, St. Clairsville, $18,890; Nelson & Harper, Barnesville, $18,880; W. W. Patton & L. P. Egger, $18,849.

Indiana, Ind. — Bids will be received as follows for highway improvements in Indiana:

Sept. 26:

Monticello—By W. J. Gridley, City Clk., until 7 p. m., for the improvement of Market St.

Oct. 3:

Bedford—By the Commissioners of Lawrence County, at 1 p. m., for a gravel and macadamized road in Pleasant Run. Ezra W. Edwards is Audr.

Oct. 21:

Williamsport—By the Commissioners of Warren County, for a gravel road. David H. Moffet is Audr.

✚CONTRACTS AWARDED.

Lafayette.—The Yohn Free Gravel Road, to WM. MAHONEY, Greencastle, Ind., at $5,294.

Covington.—The Mark O. Smith Road, to ELBERT E. McKEE, Covington, at $7,460.

Newport.—The three gravel roads to H. C. JESTER and RAY G. JESTER, Perryville, at $3,098; INGRAM & CO., Hillsdale, at $9,446; G. W. SYKES, Newport, at $7,845.

Laporte, Ind.—The Hunsley Gravel Road to JACOB B. QUIGLEY, at $32,887.

Indianapolis. — The Pleasant Run Boulevard, to the MARION COUNTY CONSTRUCTION CO., at $9,104. The other bidders were: J. Henry Roberts, $10,155; R. F. Pickens, $10,592, and the American Construction Co., $10,924.

South Bend.—The paving of Third and North Second Sts. at Niles, Mich., to C. H. DEFREES, of this city.

Catlin, Ill.—Bids will be received by the Board of Local Improvement. O. Allison, Chn., until Sept. 29, for constructing vitrified brick pavements estimated at $35,000.

Luverne, Minn.—Bids will be received by the County Commissioners until 2 p. m., Sept. 16, for constructing two miles of State gravel roads, the work including 7,000 cu. yds. earth filling, 2,400 cu. yds. gravel and 64 cu. yds. concrete. Plans are on file in office of the County Auditor.

Minneapolis, Minn.—Bids will be received by Al. P. Erickson, County Audr., until 11 a. m., Sept. 18, for macadamizing Road No. 41, according to specifications on file at the office of the County Surveyor.

✚St. Joseph, Mo.—The contract for paving Messanie St., between Fifth and Sixth Sts., with sandstone blocks, has been awarded by the Board of Public Works to the METROPOLITAN PAVING CO., at $2.88 per sq. yd., for Kettle River sandstone blocks. Other bids were: Land Construction Co., $2.98; Henry Reinert, $3.35; Young Brothers, $3.19.

Austin, Tex. — The City Commission has had plans prepared for paving six blocks of streets and a number of allies. The estimated cost is $40,000.

Colorado Springs, Colo.—Bids will be received by the City Clerk until 9 a. m., Sept. 20, for paving in District No. 1. A. J. Lawton is Comr. Pub. Wks.

Salt Lake City, Utah.—Bids will be received by the Board of Public Works, H. G. McMillan, Chn., until Sept. 15, for constructing curb and gutter and pavement in paving extension No. 75.

✚Huntington Park, Cal. — Bids have been received by the City Trustees for improving Pacific Boulevard a distance of one mile, 60 ft. wide, with oil macadam pavement and concrete curbs, as follows: R. H. McCRAY, 234 West 28th St., Los Angeles, oil macadam pavement, 322,390 s.q ft., 12 cts.; cement curb, 0,886 lin. ft., 33 cts.; cement culverts, $550; total $42,499 (awarded contract). T. E. Shafer, oil macadam, 14.7 cts.; curbs, 29.5 cts.; culverts, $900; total, $50,711. George H. Oswald, oil macadam, 13⅜ cts.; cement curbs, 30 cts.; culverts, $400; total, $47,294. M. S. Cummings, macadam, 13.95 cts.; curb, 38 cts.; culverts, $475; total, $49,015. George A. Rogers, macadam pavement, 14.5 cts.; cement curbs, 36 cts.; culverts, $850; total, $51,152.

✚Los Angeles, Cal.—F. F. PENDERGAST has ben awarded a contract for grading and building culverts in two sections of San Fernando Rd., at $43,342.

Santa Barbara, Cal. — The Board of Supervisors of Santa Barbara County have rejected all bids received for the construction of 5½ miles of macadam road in the oMntecitio Road District, and will construct the roads by day work. The estimated cost of the work is $45,000.

Toronto, Ont. — The Civic Committee on Works have decided to extend Victoria St., at an estimated cost of $315,000.

MANUFACTURING PLANTS.

(✚Denotes a contract awarded.)

Augusta, Me. — The Summers Rinen Co. has ben organized for the purpose of manufacturing. Capital, $500,000. E. M. Leavitt is Pres.

Portland, Me.—The C. W. Lerned Co. has increased its capital stock $500,000 for the purpose of manufacturing disinfectants and other chemicals.

✚Milford, N. H.—The contract for the erection of a factory building for the Clark-Cutler-McDermott Co. was awarded to H. H. LENT & CO., to be 100 42 ft. Robert A. Cook is the Arch.

Ludlow, Vt.—The Davis Packing Co., Cavendish, will erect a plant. The company is capitalized at $50,000 and will erect its plant a mile below Ludlow Village. A spur track will also be built.

✚Boston, Mass.—The contract has been awarded by Whitcomb & Co., 16 State St., for the construction of an 8-story, 132 × 100 ft., factory and warehouse building, to the NATIONAL FIREPROOFING CO., 120 Franklin St. The cost is $250,000.

Brockton, Mass. — Plans have been been made for the immediate construction of a large addition to the factory of the Montello Heel Co. The addition will be four stories in height, [illegible] ft. long and 45 ft. wide. It will n[illegible]ly triple the capacity of the factor[illegible] The concern is a Massachusetts cor[illegible]ation, of which D. W. Field is Pres. [illegible]d Alderman Henry A. Littlefield, T[illegible]s. It has purchased outright the b[illegible]ess and patent rights of the Hideit[illegible]eel Co.

Oxford, Mass.—David N[illegible]ft will build an addition to his w[illegible]en mill. To be of brick, 22 × 28 ft. a[illegible]and two stories high.

Lowell, Mass.—The Am[illegible]n Hide & Leather Co., have award[illegible] the contract to the ABERTHAW [illegible]STRUCTOIN CO., of Boston, for an [illegible]dition to their plant at Lowell, Mass[illegible] consist of five buildings as follo[illegible] 1-story beam house, 150 × 75 ft., 2-[illegible]ry hair drying house, 100 × 62 ft., 1-[illegible]ry liming house, 140 × 100 ft., 3-[illegible]ry hide house, 100 × 100 ft., 1-st[illegible] storehouse, 100 × 20 ft. Lockw[illegible] Greene & Co., of Boston, are the [illegible]hitects; Charles H. Stehling Co., [illegible]waukee, Consult. Engrs. The buildin[illegible]roughout will be of reinforced c[illegible]rete.

Southbridge, Mass.—The co[illegible]ract for the additions to the mill of [illegible]e Hamilton Woolen Co., has been a[illegible]rded to E. D. WARD, 82 Foster St., [illegible]orcester to be 170 × 50 ft. two stories, [illegible]avy mill construction, with wing, 70 [illegible]0 ft.

✚New Haven, Conn.—J. O. [illegible]oggston & Son, Lexington Ave., man[illegible]acturers of fancy paper boxes, have aw[illegible]rded the contract for the erection of their new plant to J. H. THOMPSON, N[illegible] Haven. The building will be 60 × 1[illegible] ft., two stories high, of brick and wood construction. Noted May 18.

✚Norwich, Conn.—ARCHIBALD TORRANCE, Norwich, has been awarded the contract for the erection of the plant of the United States Finishing Co. The building will be 130 × 175 ft., three stories high, of brick, with reinforced-concrete floors. Cudworth & Woodworth are the Archs.

Waterbury, Conn.—Estimates are being received on revised plans of E. E. Benedict, 51 Leavenworth St., Waterbury, for two buildings at the plant of the Shoe Hardware Co., on Brown St. One will be 86 × 90 ft., five stories high, of brick mill construction, with bluestone trim and pressed brick front, and the other 33 × 43 ft., three stories high, of the same construction, with plain front.

Camillus, N. Y. — Bids are being received by Taylor & Bonta, Archs., Aldrich Bldg., Syracuse, N. Y., for the construction of a 1-story, 50 × 100 ft., drop forge shop. The Camillus Cutlery Co. is the owner. The cost is $10,000.

Chatham, N. Y. — It is reported that the New York, New Haven & Hartford R. R. Co., the reputed owner of the branch of the Rutland Railroad extending from Bennington, Vt., to this place, will erect an engine house, machine shop, coal loading apparatus and a larger turntable here.

New York, N. Y.—The Rheinhardt Bros., Brook Ave., will erect a 4-story $30,000 factory addition. Plans by Michael J. Garvin, 3307 Third Ave.

Plans are being prepared by Benjamin F. Driesler, 178 Remsen St., for the erection of a 6-story, 90 × 90 ft., shirt factory. The Berkowitz Bros. are the owners. The cost is $80,000.

Richmond Hill, L. I., N. Y.—The Blank & Herrold Manufacturing Co., which has been incorporated with a capital of $4,000,000, will have its principal office at 150 Nassau St., New York City. The works will be at Richmond Hill, L. I.

Hoboken, N. J.—The Schwarzenbach-Huber Co. is planning the erection of an additional 5-story building to its plant here.

New Brunswick, N. J. — Walter Senhauser will enlarge his embroidery factory on Martin Ave. by building an addition 48 × 87 ft., two stories high.

✚Rahway, N. J.—The Royal Manufacturing Co. have awarded THE H. WALES LINES CO., of Meriden, Conn., the general contract for the building of their new plant, which will replace the one recently destroyed by fire. There will be three structures, one 29 × 132 ft., two stories high; one 32 × 96 ft., two stories high, and one 98 × 76 ft., one story high, of brick, steel and wood, with reinforced-concrete floors, metal window frames, skylights and elevators.

South River, N. J. — The Middlesex Embroidery Works have been incorporated by Walter Seenhauer, of this city, and Arthur Schoenbrun, of New York. The new concern is capitalized at $50,000.

Butler, Pa. — Ground will soon be broken for an extensive addition to the plant of the American Mirror Works, at Maple Ave. The contemplated addition will be 40 × 50 ft. When completed the capacity of the plant will be increased about one-half.

Elkland, Pa. — The Highland Milk Condensing Co., a recently incorporated company, will erect a condensery at Elkland.

Baltimore, Md. — The Beehive Building Co., J. E. Aldred, Member of Com., will erect factory building at Greenmount and Preston Sts., to cost $200,000. P. O. Keilholtz, Continental Bldg., is the Engr.; Theodore Wells Pietsch, 1001 American Bldg., is the Arch.

Clarksburg, W. V.—Bids will be received until Sept. 20 by Edward J. Woods, Lowndes Bldg., for the erection of a 1-story, 44 × 120 ft., factory, with wings, 20 × 30 ft. and 27 × 27 ft. The Clarksburg Foundry & Casting Co. is the owner.

Newton, N. C.—Newton Oil & Fertilizer Co., Newton, N. C., will build cotton oil mill, to cost $30,000.

Whitmire, S. C.—The Glenn-Lowery Manufacturing Co. have completed arrangements enlarging their plant and increasing the capital to $500,000.

Atlanta, Ga.—The Exposition Cotton Mills have awarded a contract for the construction of a $20,000 loom shed and will install 10,000 spindles, with accompanying looms.

Corey, Ala.—It is reported Culpepper Exum, Birmingham, Ala., and associates are organizing a company to invest about $250,000 for constructing and equipping a plant at Corey for an annual capacity of 35,000 tons of sulphuric acid.

+Amherst, Ohio.—The U. S. Automatic Co., Amherst, has awarded the contract to JOHN KAISER & BRO. CO., Elyria, for the construction of a factory building. Plans by Paul A. Rissmann, Elyria, Ohio. The cost is $11,000.

Cincinnati, Ohio.—H. E. Kennedy & Co. are preparing plans for a 3-story fireproof building, Race St., for United States Tire Co.

+Cincinnati, Ohio.—The contract has been awarded to EVANS, RENDIGS CO., Reading Road, Cincinnati, for the erection of a 2-story, 60 × 125 ft., electrical sub-station for the Union Gas & Electric Co., Fourth and Plum Sts. Plans by Sargent & Lundy, 80 East Jackson Blvd., Chicago.

+Cleveland, Ohio.—The National Tool Co., 9500 Madison Ave., has awarded the contract to the STEMPLE CONSTRUCTION CO., 3325 Scranton Road. Plans by H. A. Duetemeyer. The cost is about $15,000.

+Hamilton, Ohio.—The contract has been awarded to CULLEN & VAUGHN for the construction of two additions to the Miami Woolen Mills in Lindenwold. The cost is $15,000.

Youngstown, Ohio. — The National Electric Lamp Association is to erect at the plant of the Banner Electric Co. at Youngstown, a new factory. Samuel Austins Sons Co. drew the plans.

Toledo, Ohio.—George S. Mills, 1234 Ohio Bldg., Toledo, has awarded the general contract for the 1-story factory building, 400 × 60 ft. for the Madras Spring Co., to GEORGE SPIEKER CO., 409 Michigan St., Toledo. Cost, $25,000.

Grand Rapids, Mich.—Robinson & Campau, Houseman Bldg., Grand Rapids, are preparing plans for a 1-story factory building, 50 × 100 ft. for the J. B. Stone Co. Cost, $30,000.

O. and W. Thumb Co., Grand Rapids, are having plans prepared for a 4-story factory, 110 × 160 ft., for the manufacture of sticky fly paper. Owners will soon be ready for bids. Cost, $35,000.

Detroit, Mich.—Plans are being prepared by J. J. Haarer, Comr. of Pub. Wks., 104 City Hall, for the construction of a creosoting plant, to cost $30,000.

The Detroit Steel Products Co., Bird and Griffin Sts., are having plans prepared for a 1-story factory addition, 87 × 110 ft. The towners will purchase all materials and sub-let contracts.

The Pewabic Pottery Co., 2161 Jefferson Ave., are having plans prepared for a 2-story factory addition, and owners wil purchase all materials and sub-let contracts.

The Schmeid-Sisman Co., 395 Beaufait, are having plans prepared for a 2-story factory building, 135 × 150 ft., to replace the building recently destroyed by fire. Owners will purchase all materials and sub-let all contracts. Cost, $35,000.

+Albert Kahn and E. Wilby, Trussed Concrete Bldg., Detroit, have awarded the following contracts for a 1-story factory addition, 189 × 65 ft., for the McCord Mfg. Co., 2587 North Grand Blvd.: Masonry, to P. N. COOPER, 203 Grandy Ave.; carpentry to J. H. A. HABERKORN, 380 14th Ave.; cost, $25,000.

+G. V. Bottle, 708 Gas Co. Bldg., has awarded the following contracts for the 2 and 3-story factory addition for the Ross & Young Machine Co., 9 Center St.: Masonry to CHAPMAN BROS., Humbolt Ave. and M. C. R. R.; carpentry to DETLOFF BROS., 1192 Bellevue Ave.; cost, $25,000.

Smith, Hinchman & Grylls, 710 Washington Arcade, Detroit, are preparing plans for a 2-story office building, 31 × 72 ft., and a 1-story boiler house, 60 × 64 ft., and a 2-story factory building, 141 × 62 ft., for the Herresho Motor Co., Jefferson Ave., Detroit; cost, $50,000.

Mittleton & Weaver, 1405 Penobscot Bldg., Detroit, have prepared plans and will receive bids soon on a 3-story and basement factory building, 50 × 75 ft., for the Superior Cigar Manufacturing Co., 265 Jefferson Ave.; cost, $40,000.

Smith, Hinchman & Grylls, 710 Washington Arcade, Detroit, are preparing plans for a 1-story factory, 56 × 65 ft., for the Public Lighting Commission of Detroit. F. T. Bowler is Secy., 40 East Atwater St.

L. Kamper, 703 Fine Arts Bldg., Detroit, is awarding contracts for a 1-story laundry building, 80 × 95 ft., for E. Schmidt, Monroe Ave. and Beanbien St., Detroit.

Freeport, Ill. — The W. T. Rawleigh Medical Co. will erect a 6-story manufacturing building. Charles A. Chapman, 28 East Jackson Blvd., Chicago, is Engr.

Chicago, Ill.—A one and 2-story bakery, store and flat building, 144 × 125 ft., will be erected by the Northwestern Baking Co., 1347 Milwaukee Ave. Plans are being prepared by Maurice Spitzer, 9 South La Salle St. The cost is $40,000.

Milwaukee, Wis.—Plans for a bakery building are being prepared by G. A. Dick, Arch., 1107-8 Pabst Bldg., to be erected for Schiffier Bros., 1116 Richards St., which calls for expenditure of $100,000.

St. Paul, Minn.—The Stahl-Salter Lubricating Co., Minneapolis, Min., will build a factory for making lubricating oils at Wycliff and Bradford Sts. It will be 2-story, of reinforced concrete. Cost, $25,000.

+The GEORGE J. GRANT CONSTRUCTION CO., 709 New York Life Bldg., was awarded the contract for the construction of a 5-story reinforced-concrete factory addition for Charles A. Stickney & Co., on the West Side. J. F. Denson, St. Paul, is Arch. Cost, $25,000.

The Northern Pacific Ry. Co., W. L. Darling, Ch Engr., is receiving bids for the construction of a group of terminal structures at Pasco, Wash. Repair shops, machine shop, roundhouses and paint shop are included in the plans; all 1 or 2-story, brick and concrete construction. Cost, $150,000.

Bids have been received by the Haynes Bread Co., Minneapolis, Minn., for the construction of a 3-story reinforced-concrete bread factory to be built at University Ave. and Dale St. It will be 55 × 116 ft., of white enameled brick, with a 5-oven capacity, and includes equipment and stables. Downs & Eads, New York Life Bldg., are Archs. Cost, $40,000.

Great Falls, Mont.—Plans are being prepared by A. Raymond Ellis, Hartford, Conn., for a concrete and brick factory building for the American Linen Fibre Co., of Philadelphia, Pa. The building will be 162 × 37 ft., and will require a 75-HP. engine, a flax dryer, a suction pipe conveyor and an automatic bailing apparatus.

St. Louis, Mo.—It is reported that the Lowell Bleachery, of Lowell, Mass., will erect a branch factory at St. Louis.

Carthage, Mo.—A mill of 300 tons capacity is being erected at the Sampson mine. H. M. Cornell and associates with him in the lease of this mine and mining land are putting up the mill.

+St. Louis, Mo.—A contract for the erection of four fireproof buildings for the Wright Iron Range Co., to cost $179,425, was awarded by Baker & Knell, Archs., to MURCH BROS. CONSTRUCTION CO., which will begin work on the buildings soon. The plant is to be at Natural Bridge Road and Terminal Belt Railroad tracks, where the Wrought Iron Range Co. has purchased 15 acres. The buildings are to be of brick and reinforced-concrete and fireproof throughout. The estimate of $179,425 does not include the heating plant, heating apparatus and machinery, which are to be put in by the owners after the buildings are completed.

***Hot Springs, Ark.**—Bids will be received here until 11 a. m., Oct. 5, for furnishing and installing one 6-ton ice-making ammonia compressor and engine. Information on application to Maj. G. D. Deshon is Q. M.

Bay City, Tex.—The Business League of this place is promoting the establishment of a creamery here. M. Thompson, O. J. Doubeck and B. E. Norvell have charge of the matter.

Dallas, Tex.—The Munger Automobile Co. has been formed here with a capital stock of $25,000. The incorporators are S. I. Munger, L. R. Munger and S. I. Munger, Jr.

El Paso, Tex.—Morris & Co. will install a cold storage plant here at a cost of $18,450.

Laredo, Tex.—The Laredo Waterworks Co. will install a large amount of new machinery in its plant here, enlarging the capacity of the plant and making other improvements.

Plainview, Tex. — R. P. Smythe and associates are promoting the establishment here of a beet sugar factory to cost about $600,000.

+Redondo Beach, Cal.—The contract for building the $15,000 ice and cold storage plant here has been awarded to J. W. KESSLER. The plant will be 66 × 38 ft., and will be built of wood, with asbestos lining for fire protection. There will be six storage rooms besides the freezing rooms and the freezing tank, which will be 12 × 30 ft.

Plomosos (Sonora) Mex.—The Alamos Mining and Exploration Co. will install a reduction mill at its mine here.

MISCELLANEOUS CONTRACTS.

(**Denotes that this work is advertised in Engineering News.*)

U. S. RECLAMATION SERVICE.—All news concerning canal and Irrigation projects, etc., will be found under Water Supply—Irrigation.

Meter Boxes. — Boston, Mass. — Bids will be received until Sept. 15 by the Department of Public Works for setting concrete meter boxes in East Boston. Lous K. Rourke is Comr. of Pub. Wks.

Barge Canal.—Albany, N. Y.—Plans for the improvement of the West Canada Creek were approved Aug. 30 by the Canal Board. The plans provide for straightening the creek and raising its banks so as to prevent damage from floods. Bids will be received soon. The estimated cost is $65,000.

Tunnel Street.—New York, N. Y.—Bids for constructing a tunnel street from Broadway, near Fairview Ave., to the subway station at 191st St. and St. Nicholas Ave., were received Sept. 1, as follows: R. D. Williams, 257 Broadway, $72,226; S. J. Harry Co., $103,490; H. D. Robinson, $85,990; T. C. Rodgers, Jr., $90,230; Charles Mead & Co., $82,830; Harrison Burton, $93,365; Henry E. Fox, $79,387; Rodgers & Hagerty, Inc., $89,450; T. J. Farshew, $113,447; Stobaugh Construction Co., $76,886; Croney Campbell Co., $89,235; United Engineering & Contracting Co., $84,019; T. J. & G. L. Brown, $83,420. The item bids of R. D. Williams, the lowest bidder, were as follows: 5,900 cu. yds. rock excavation, $6.75; 2,300 cu. yds. earth excavation, $1.20; 1,200 cu. yds. refill, 30 cts.; 2,200 cu. yds. Portland cement, $7.78; 750 cu. yds. excess Portland cement, $6; 200 cu. yds. dry packing, $2; 30,000 ft. board measure, $60; 12,000 ft. board measure, $30; 1,000 lin. ft. galvanized w.-i. pipe, 50 cts.; 800 lin. ft. 6-in. vitrified pipe, $1; 10 catch basins, $20; 360 sq. ft. steps and land, 40 cts.; 3,300 sq. yds, surfacing, 15 cts.; 11,000 sq. ft. floor finish, 10 cts.; 5,000 lb. steel rods and bars, 4 cts.; 11,000 lb. steel beams, 5 cts.; complete electric lighting system, $1,150.

Roof Repair.—New York, N. Y.—Bids will be received by George McAneny, Pres. Boro. of Manhattan, until 2 p. m., Sept. 19, for general repairs to the roofs and skylights of the Rivington St., Public Bath Building, 324 Rivington St., Boro. of Manhattan.

***Phoenix, N. Y.**—Bids will be received by the Town Clerk of the town of Schroeppel, at Phoenix, until 2 p. m., Sept. 22, for the construction of piers, abutment and substructure of the reinforced-concrete bridge to be built across the Oswego River at Phoenix. Plans and specifications are on file at the office of the Town Clerk of Schroeppel at Phoenix, and the Town Clerk of Lysanden at Baldwinsville.

Moorings.—Tompkinsville (S. I.), N. Y.—Bids will be received by the Light House Inspector until Sept. 21 for furnishing moorings required by the Light House Service during the year ending June 30, 1912. The articles to be furnished include chains for light vessels, chain for buoys, bridle chains, mushroom anchors, swivels for light vessels and buoy chain and shackles for light vessel and buoy chain.

+Concrete Flume.—Watertown, N. Y.—The contract for constructing a concrete flume along the north side of Beebe's Island has been awarded to C. D. HODGE & CO., Watertown, at $15,000.

Dredging.—Herkimer, N. Y. — Bids will be received by C. F. Treman, Supt. Pub. Wks., at Albany, until noon, Sept. 26, for dredging the Mohawk River and West Canada Creek at Herkimer. The work consists of excavating about 220,000 cu. yds. J. A. Bensel is State Engr.

Dredging.—Raritan, N. J.—Bids will be received by Col. William T. Russell, Corps Engrs., U. S. A., New York, N. Y., until Oct. 7, for dredging in Raritan Bay, N. J., and for removing rock, hard pan, gravel and boulders from Arthur Kill.

Dredging. — Philadelphia, Pa. — The only bid received Aug. 31 at the office of Maj. H. Deakyne, Corps Engrs., U. S. A., for dredging in Delaware River, was that of the River & Harbor Improvement Co., Philadelphia, for dredging in Mud Section, 53,000 cu. yds., 30 cts.; Burlington Section, 43,000 cu. yds., 39 cts., or for dredging both sections, 96,000 cu. yds., at 33 cts. per cu. yd.

+Dikes.—Philadelphia, Pa.—The contract for constructing four dikes in the Delaware River has been awarded to the BREAKWATER CO., Buxalo, N. Y., at $1,200,000.

Playground. — Philadelphia, Pa.—The contract for building a public playground at 56th and Christian Sts., has been awarded to EDWARD FAY & SON, Philadelphia. The estimated cost is $60,000.

Fire Station. — Philadelphia, Pa. — Bids for constructing a fire station at Sixth St. and Lehigh Ave. have been received by the Department of Public Safety, as follows: Wayne Construction Co., $33,550; Henry E. Baton, $35,677; John R. Wiggins & Co., $37,578; James G. Doak & Co., $37,685.

Cable. — Washington, D. C. —Bids will be received by the District Commissioner until 2 p. m. Sept. 18 for furnishing underground signal and telephone cable. Cuno H. Rudolph is Chn. of Comrs.

Cranes. — Washington, D. C. — Bids will be received by the Bureau of Yards and Docks, Navy Department, Washington, D. C., until Sept. 30, for two 15-ton locomotive jib cranes. William M. Smith is Act. Ch.

Piers.—Washington, D. C.—Bids will be received by Wm. M. Smith, Acting Chief of Bureau of Yards and Docks, until 11 a. m., Oct. 7, for constructing Piers E and F, of reinforced concrete.

Dredging. — Richmond, Va. —Bids will be received by Col. W. C. Lanfitt, Corps Engrs. U. S. A. until noon Sept. 22 for dredging in the James River.

Levee.—Jackson, Miss.—Bids will be received by the Mississippi Board of Levee Commissioners until Oct. 2 for 57,000 cu. yds. of enlargement work.

Lock.—Louisville, Ky.—Bids will be received by Maj. Lytle Brown, Corps Engrs., U. S. A., until 11 a. m., Oct. 14, for constructing Lock No. 41, Ohio River, at Louisville.

+Earthwork. — Norwood, Ohio. — The contract for about 57,000 cu. yds. of earthwork, including trenching and clearing for excavation, was awarded Aug. 25 to LOFTUS & SKIDMORE, at $12,255.

Fire Apparatus.—Decatur, Ind.—Bids are being received by the Town council for the furnishing new fire apparatus with complete equipment.

Oil Wells.—Greensburg, Ind.—Bids are being received by the Lima Oil Co. for drilling oil wells in Decatur county.

+Ditch.—Detroit, Mich.—The contract for constructing Ditch No. 9 was awarded Aug. 30 to GRAUPMANN BROS., Glencoe, at 8 cts. per cu. yd.

Rock.—Alpena, Mich.—Bids wil be received by Col. C. M. Townsend, U. S. Engineer's Office, Detroit, until 3 p. m., Oct. 16, for furnishing 1,000 tons of rock for piers at Alpena.

+Channel Excavation. — Chicago, Ill.—Bids will be received by I. J. Bryan, Clk. Sanitary Dist. of Chicago, until noon, Oct. 2, for excavation and collateral work on Section 2 of the Calumet-Sag Channel. The approximate quantities are: 221,000 cu yds of glacial drift. 351,000 cu yds of rock excavation. 313,000 sq ft of channeling. 3,200 cu yds of concrete retaining wall, 1,100 cu. yds. of dry rubble wall.

+Blast Furnaces.—Superior, Wis.—The contract for erecting two blast furnaces has been awarded to the PENNSYLVANIA ENGINEERING WORKS, Newcastle, Pa. The steel and iron work of the new plant to the MINNESOTA STEEL CO. The contracts amount to about $1,000,000.

Coal Docks.—Superior, Wis.—The Pittsburgh Coal Company is planning improvements costing over $500,000 for its dock No. 5 at Allouez. W. K. Field is Pres.

+Fire Station.—Mason City, Iowa.—The contract for the general construction of the 2-story pressed brick and cut stone fire station, has been awarded to BAILY-MARSH CO., Minneapolis, at $21,000. Buechner & Orth, 500 Shubert Bldg., St. Paul, Minu., are Archs.

Fire Hall.—Duluth, Minn.—Bids will be received by the Board of Fire Commissioners, City Hall, until Sept. 15, for repairing Fire Hall at Duluth Heights.

Ditch. — Mankato, Minn. — Bids for constructing Ditch No. 27 were received on Aug. 31 as follows: G. D. Gilbertson, St. James, $18,950; George W. Norman, $19,000. Edgar Weaver is County Audr. Noted Aug. 17.

Ditch.—Mankato, Minn.—Bids will be received by Edgar Weaver, County Audr., Mankato, until Sept. 18, for constructing Ditch No. 26, about 5 to 8 miles from Lake Crystal, requiring 37,685 cu. yds. of open work and 15,805 lin. ft. of 6 to 12-in. tile.

Dredging.—Minneapolis, Minn. — The lowest bid received Sept. 1 by the Board of Park Commissioners for dredging Cedar Lake and for filing low lands and boulevard adjacent, about 200,000 cu. yds., was that of John Albrecht, Glencoe, Minn., at 12½ cts. per cu. yd.

Air Compressors.—Leavenworth, Kan.—Bids will be received by R. V. La Dow, Supt. Prisons, Dept. of Justice, Washington, D. C., until Sept. 18, for air compressor, air receiver, riveting hammers and hose, for use of the U. S. Penitentiary at Leavenworth.

Ditches and Culverts. — Powell Wyo.—Bids will be received the United State Reclamation Service, Powell, until 2 p. m. Oct. 2, for the construction of ditches and culverts in the vicinity of Powell and Garland, Wyo. The work involves the excavation of about 179,000 cu yds of material and the construction of about 2,000 lin ft of wooden box culverts.

Fire House.—Tucumcari, N. Mex.—See item under Water-Supply-Irrigation.

+Canal.—North Yakima, Wash.—The contract for reconstructing 11,000 ft. of the line of canal with reinforced-concrete has been awarded to W. F. POWELL, at $34,113.

Freight Sheds. — San Diego, Cal.—The Santa Fe R. R. Co. is contemplating the construction of two concrete freight sheds, each 60 × 300 ft., to cost $200,000.

Jetty Slip.—Eureka, Cal.—Bids for constructing a slip at the South Jetty have been received as follows: Independent Bridge Co. of Alleghany, Pa. at $9,405; Eureka Foundry Co., $7,755; Moore & Scott Iron Works, $9,210; American Bridge Co. $5,825; Petterson Construction Co. $6,587; Judson Mann, San Francisco, $9,391.

Pier.—Long Beach, Cal.—Bids for constructing the Devils Gate pier and repairing the Pine Ave. pier have been received by the City Council as follows: The American Bridge & Construction Co., Los Angeles, $31,532 (for pier only). The Raymond Concrete Pile Co of New York $125,000.

Shed.—Montreal, Que.—Bids will be received by the undersigned until Sept. 15, for the construction of a shed on the Victoria Pier similar to the present wharf sheds. Bid forms may be had upon application to F. W. Cowie, Ch. Engr.

Dredging.—Ottawa, Ont.—Bids will be received until Sept. 20 for the construction of pile protection work and dredging channel at Lake Ainslie, Inverness County, N. S. Plans, specifications and forms of contract can be seen and forms of tender obtained at the offices of C. E. W. Dodwell, Dist, Engr., Halifax, N. S. R. C. Desrochers is Secy., Dept. of Public Wks., Ottawa.

Breakwater.—Ottawa, Ont.—Bids will be received until Sept: 25 for the construction of a breakwater at St. Joseph, Inverness County, N. S. Plans, specifications and forms of contract can be seen, and forms of tender obtained at the offices of C. E. W. Dodwell, Dist. Engr., Halifax, N. S. R. C. Desrochers is Secy., Dept. of Pub. Wks., Ottawa.

Breakwater.—North Bay, Ont.—Bids will be received until Oct. 2 by R. C. Desrochers, Secy., Pub. Wks. Dept., Ottawa, for the construction of a breakwater. Plans, specification and form of bid obtained at the Department, Ottawa, or at office of J. G. Sing, District Engineer, Toronto, or the Postmaster, North Bay.

Retaining Wall.—Owen Sound, Ont.—Bids will be received by R. C. Desrochers, Secy, Pub. Wks, Dept. Ottawa, until Sept. 26 for the construction of a retaining wall. Plans, specifications and form of contract can be seen and form of bid obtained at the Department, or at office of J. G. Sing, District Engineer, Toronto, H. J. Lamb, District Engineer, London, or the Postmaster, Owen Sound.

CONTRACT PRICES.

Catskill Aqueduct, Contract 87.—New York, N. Y.—Bids for constructing the Brooklyn conduit were received by the Board of Water Supply on Aug. 1, as follows: (A) William F. Donovan & Charles Cranford, 186 Remsen St., Brooklyn, N. Y.; (B) J. F. Cogan Co., 280 Broadway, New York; (C) Degnon Contracting Co., 60 Wall St., New York; (D) James H. Holmes, 87 Nassau St., New York; (E) Booth & Flinn, Ltd., 1942 Forbes St., Pittsburgh, Pa.; (F) Donlon Contracting Co., 84 Broadway, Brooklyn, N. Y.; (G) Patrick McGovern, 6 Beacon St., Boston, Mass; (H) Cranford Co., 52 Ninth St., Brooklyn, N. Y. The item bids were as follows:

***Catskill Aqueduct, Contract No. 107.**—New York, N. Y.—Bids for valves, hydraulic cylinders and appurtenances in various structures were received by the Board of Water Supply on Aug. 3, as follows: (A) Chapman Valve Manufacturing Co., Indian Orchard, Mass.; (B) A. P. Smith Manufacturing Co., East Orange, N. J.; (C) Pittsburgh Valve, Foundry & Construction Co., Pittsburg, Pa.; (D) Kennedy Valve Manufacturing Co., Elmira, N. Y., 57 Beekman St., New York; (E) Coffin Valve Co., Boston, Mass. The item bids were:

CATSKILL AQUEDUCT, CONTRACT 107, NEW YORK, N. Y.

	A.	B.	C.	D.	E.
4 54-in. gate-valves	$1,787.00	$2,500.00	$1,567.00	$2,340.00	$1,760.00
8 48-in. gate-valves	2,060.00	2,250.00	1,914.00	2,130.00	1,985.00
19 36-in. gate-valves	1,075.00	1,120.00	1,247.00	1,244.00	1,445.00
2 30-in. gate-valves	925.00	780.00	1,058.00	925.00	1,400.00
8 24-in. gate-valves	550.00	590.00	764.00	707.00	810.00
14 20-in. gate-valves	330.00	304.00	438.00	390.00	431.00
72 16-in. gate-valves	310.00	206.00	275.00	332.00	390.00
56 12-in. gate-valves	150.00	116.00	202.00	171.00	196.00
2 48-in. gate-valves of Contractor's design	1,276.00	1,500.00	1,629.00	1,200.00	1,560.00
3 36-in. gate-valves of Contractor's design	540.00	625.00	781.00	532.00	735.00
2 30-in. gate-valves of Contractor's design	425.00	350.00	622.00	390.00	533.00
6 24-in. gate-valves of Contractor's design	240.00	285.00	406.00	240.00	365.00
1 20-in. gate valve of Contractor's design	150.00	135.00	270.00	167.00	278.00
9 12-in. gate-valves of Contractor's design	37.00	45.00	105.00	48.00	99.00
27 6-in. gate-valves of Contractor's design	14.50	15.00	51.00	20.00	42.00
1 40-in. iron blow-off valve	3,480.00	6,000.00	3,284.00	3,660.00	4,825.00
1 40-in. bronze blow-off valve	7,475.00	11,000.00	7,231.00	9,603.00	9,305.00
2 hydraulic cylinders for 40-in. blow-off valves	1,650.00	1,525.00	1,834.00	1,934.00	1,745.00
4 hydraulic cylinders for 54-in. gate-valves	1,600.00	1,750.00	2,010.00	2,118.00	2,105.00
15,500 lbs. bronze piping	.35	.40	.28	.50	.38½
17,900 lbs. cast-iron piping	.10	.07	.05	.09	.08
1,400 lbs. miscellaneous bronze	.40	.40	1.00	.50	.40
2,000 lbs. miscellaneous cast iron and steel	.11	.07	.09	.10	.26
Totals	$121,629	$124,577	$131,656	$139,701	$150,148

CATSKILL AQUEDUCT, CONTRACT 87, NEW YORK, N. Y.

	A	B	C	D	E	F	G	H
63,000 cu. yds. earth excavation and refilling	$1.26	$2.00	$1.60	$1.60	$1.50	$1.50	$2.25	$2.71
2,800 cu. yds. rock excavation	2.00	6.00	3.00	4.00	4.00	.01	7.00	4.00
5,840 lin. ft. 66-in. steel pipe, ½-in. plate	12.42	13.00	16.00	18.00	16.50	19.75	14.75	19.00
11,180 lin. ft. 66-in. steel pipe, 7/16-in. plate	11.38	12.00	15.00	17.00	15.50	19.75	14.25	18.00
40 tons c.-i. pipe, straight hub-and-spigot	45.00	40.00	32.50	30.00	90.00	70.00	150.00	40.00
25 tons c.-i. hub-and-spigot special castings	150.00	90.00	75.00	70.00	125.00	70.00	200.00	100.00
20 tons c.-i. flanged pipe and flanged specials	100.00	130.00	80.00	70.00	150.00	70.00	225.00	75.00
50 tons c.-i. valves boxes, manhole heads and covers	75.00	90.00	70.00	60.00	80.00	55.00	150.00	55.00
12,000 lbs. steel castings	.15	.10	.09	.04	.11	.07	.10	.12½
250,000 lbs. caring for and setting metal work furnished by the city	.04½	.04	.01¼	.01	.05	.02	.04	.03½
1 66-in. Venturi meter	2,800.00	3,000.00	2,500.00	2,500.00	2,500.00	4,000.00	2,000.00	3,000.00
20,000 lbs. structural and reinforcing steel	.05	.05	.03½	.04	.05	.04	.05	.04
12,000 lbs. miscellaneous cast-iron, wrought iron and steel	.05	.08	.05	.04	.05	.05	.05	.10
4,200 bbls. Portland cement	1.50	1.50	1.50	2.00	1.50	1.70	1.60	1.50
2,200 cu. yds. concrete masonry under pavement	4.00	3.50	4.50	4.50	6.00	5.00	6.00	4.50
550 cu. yds. concrete masonry as cradles for sewers or drains	4.92	10.00	5.00	6.00	8.00	6.50	8.00	8.00
650 cu. yds. brick or concrete masonry in chambers and sewers	8.21	10.00	12.00	15.00	10.00	12.00	12.00	10.00
9,000 lbs. lead pipe	.26	.20	.15	.10	.12	.07	.15	.25
10 cu. yds. crushed stone and gravel	2.00	5.00	1.50	1.75	2.50	1.30	4.00	3.00
6,500 lin. ft. vitrified or cement pipe, 3 to 8 ins.	.30	.80	.15	.20	.90	.35	.30	.65
7,400 lin. ft. vitrified or cement pipe, 9 to 15 ins.	.50	1.00	.60	.50	1.50	1.00	.75	1.50
400 sq. yds. Belgian block pavement	.33	1.50	1.20	.50	1.50	.40	2.00	.40
200 sq. yds. granite block pavement	.77	1.50	1.20	1.00	1.75	.50	2.00	1.00
200 sq. yds. sandstone block pavement	.90	2.00	1.20	.50	1.75	.40	2.00	2.00
11,500 sq. yds. sheet asphalt pavement	1.50	1.00	1.25	2.00	3.00	2.00	3.00	1.25
1,100 sq. yds. flag sidewalks and crosswalks	.90	1.50	1.00	1.00	.90	.25	.50	.90
550 lin. ft. curb	.30	1.00	.20	.20	.50	.10	.40	.60
25,000 sq. ft. cement concrete sidewalks	.10	.16	.18	.20	.20	.20	.25	.22½
Totals	$366,014	$439,440	$441,195	$488,267	$497,515	$519,116	$528,735	$584,515

Sewer.—Fitchburg, Mass.—Bids were received Aug. 15 by the Sewage Disposal Commission for the main intercepting sewer, Section 2, from the following: (A) C. E. Trumbull Co., Boston, Mass.; (B) A. G. Tomasello, Dorchester, Mass.; (C) Little & Seretto, Leominster, Mass.; (D) George W. Carr Co., Worcester. Mass.; (E) John J. Falvey, Somerville, Mass.; (F) James D. Kelly, Dorchester, Mass.; (G) Coleman Bros., Boston, Mass. The itemized bids were as follows:

SECTION 2.

	A	B	C	D	E	F	G
1,590 lin. ft. excavation and refilling trench	$3.70	$2.45	$3.06	$4.44	$3.50	$6.60	$9.00
845 lin. ft. excavation and refilling trench	4.70	7.82	9.57	8.08	8.00	9.00	15.00
573 lin. ft. excavation and refilling trench	7.20	9.62	8.78	12.49	15.00	11.70	9.00
582 lin. ft. excavation and refilling trench	6.70	14.92	9.07	9.00	15.00	7.65	8.00
1,020 cu. yds. rock excavation in trench	4.00	5.00	7.00	6.00	5.00	4.00	6.00
600 cu. yds. earth excavation below grade	2.00	.60	.75	1.25	2.00	3.00	3.00
750 cu. yds. gravel filling below grade	1.50	1.30	1.25	1.00	1.00	1.50	1.50
4,550 cu. yds. earth filling in embankment	1.00	.70	.50	.78	1.00	1.50	1.00
84 sq. yds. brick masonry in invert	2.50	3.00	4.34	2.50	3.00	3.00	6.00
25 cu. yds. brick masonry in manholes	15.00	16.00	17.00	15.00	16.00	15.00	20.00
1,560 cu. yds. concrete masonry in trench	9.00	10.25	11.00	11.82	10.50	10.00	10.00
54,000 lbs. deformed steel bars	.05	.04½	.04	.03	.04	.04½	.04
Channel for brook crossing (lump sum)	350.00	300.00	200.00	300.00	600.00	200.00	1,000.00
1 channel excavation of sewer	100.00	75.00	65.00	61.50	150.00	70.00	200.00
1 channel excavation of sewer	100.00	75.00	65.00	61.50	160.00	100.00	200.00
Totals	$46,710	$53,841	$54,504	$58,518	$61,352	$61,112	$70,557

SECTION 2A.

	C	F	B	G
1,220 lin. ft. excavation and refilling trench	$6.84	$9.00	$6.75	$7.00
1,570 lin. ft. earth and rock tunnel	15.85	17.50	23.75	37.50
80 lin. ft. excavation and refilling trench	15.50	15.00	20.00	20.00
850 cu. yds. rock excavation in trench	6.00	4.00	5.00	6.00
70 sq. yds. brick masonry in invert	4.34	3.00	3.00	6.00
10 cu. yds. brick masonry in manholes	17.00	15.00	16.00	20.00
520 cu. yds. concrete masonry in trench	11.00	10.00	9.00	10.00
650 cu. yds. concrete masonry in tunnel	15.00	12.00	15.00	15.00
4,000 lbs. steel bars	.04	.04½	.04½	.04
Totals	$57,073	$58,695	$67,402	$91,595

***Sewer.**—Louisville, Ky.—Bids were received Aug. 18 by P. L. Atherton, Chn. Sewerage Comn., for constructing sewer in Alta Ave., from: (A) Henry Bickel Co., Louisville, Ky.; (B) C. T. McCracken & Co., Columbus, Ohio; (C) James Ferry & Sons Co., Pittsburgh, Pa.; (D) B. C. Miller & Sons Co., Louisville, Ky. The item bids were as follows:

SEWER IN LOUISVILLE, KY

	A	B	C	D
4,220 lin. ft. earth excavation	$2.75	$3.20	$3.90	$5.00
1,430 cu. yds. rock excavation	4.00	4.50	3.00	6.00
675 cu. yds. concrete masonry	12.00	12.50	14.00	17.00
10 cu. yds. excavation below masonry	2.00	4.00	3.00	2.00
10 cu. yds. gravel fill below masonry	2.00	4.00	3.00	2.00
Vitrified pipe (lump sum)	1,474.03	1,965.37	2,211.04	2,456.72
4,804 lin. ft. pipe laying	.25	.40	.30	.50
2,000 lin. ft. 8-in. underdrain	.35	.30	.30	.40
Cleaning up	500.00	200.00	200.00	200.00
Totals	$29,340	$33,143	$34,710	$45,854

EXAMINATIONS.

Laboratory Assistant In Timber Tests.—Washington, D. C.—The U. S. Civil Service Commission announces the postponement to Oct. 4, of the examination announced to be held on Aug. 23, to secure eligibles from which to make certification to fill a vacancy in the position of Laboratory Assistant In Timber Tests in the Forest Products Laboratory of the Forest Service, Department of Agriculture, at Madison, Wis., at $800 a year, and vacancies requiring similar qualifications as they may occur, unless it shall be decided in the interest of the service to fill the vacancy by reinstatement, transfer, or promotion. The examination will consist of the subjects mentioned below, weighted as indicated: Arithmetic, 10 points; Care of machinery and preparation of test specimens, 30 points; Training, experience, and fitness, 60 points. Applicants must have reached their 18th birthday. Examination form 1312.

Laboratory Assistant.—Washington, D. C.—The U. S. Civil Service Commission announces an examination on Oct. 4, to secure eligibles from which to make certification to fill vacancies as they may arise in the positions of Aid (qualified in ceramics), at [illegible] and $840 a year, and Laboratory Assistant (qualified in ceramics), at salaries ranging from $900 to $1,200 a year, according to the rating received, and vacancies requiring similar qualifications as they may occur in any branch of the service, unless it shall be decided in the interest of the service to fill the vacancy by reinstatement, transfer, or promotion. The examination will consist of the subjects mentioned below, weighted as indicated: Elementary mathematics, including trigonometry, 10 points; Elementary geology and mineralogy, 10 points; General inorganic chemistry, 15 points; Elementary physics, 15 points; Ceramics, 25 points; Education and technical experience in ceramics, 25 points. Applicants must have reached their 20th birthday. Examination form 1312.

INDUSTRIAL NOTES.

Mr. Robert R. Hurtzog, who has been connected for more than twenty years with the Chicago Railways Co., has recently resigned as General Superintendent of that company to accept a position as General Manager of the Western branch of the Whitmore Manufacturing Co., of Cleveland, Ohio, with offices in the Monadnock Block, Chicago.

Mr. Benjamin T. Delafield, who formerly represented the Lunkenheimer Co., for a number of years in the St. Louis and Kansas City territory has become connected with the Best Manufacturing Co., of Pittsburgh, Pa., to handle their line of valves, fittings, flanges, pipe bonds, fabricated pipe and other power plant material in the same territory. He will make his headquarters in Kansas City.

The Pennsylvania Railroad is at present owned by 69,760 persons who are listed as bona fide stockholders. The total outstanding capital stock of the company on August 5 was $450,974,050, divided into 9,019,481 shares. The average number of shares held by each one of the 69,750 stockholders is a little more than 129. The dividends paid on the stock of record on August 5 amounted to $6,764,610.75. The figures disclose the fact that on August 1, 15.65% of the entire capital stock was held abroad by 10,000 shareholders, with average holdings of 141 shares each. In the United States on the same date 21,545 shareholders were located in the State of Pennsylvania, with average individual holdings of 108 shares. In New York State there were 12,006 shareholders. The number of women shareholders was 32,801.

The American Locomotive Co. in its annual statement for the year ending June 30, 1911, says that the gross earnings were $40,000,000, an increase compared with every year in the last four Net earnings, however, were less than in 1908. Pres. W. H. Marshall states as follows: "Although the volume of gross earnings for the year is gratifying, in comparison with the preceding year, the plants are still contending with the economic difficulties of fluctuating activities which have prevailed in varying degrees since the depression of 1907. The production varied during the year from a maximum of 80%, the capacity of the plants, to a minimum of 38%.

"At the beginning of the year, there were unfilled orders on the books of $17,550,000 nearly one-half of the gross earnings for the year, and in July, 1911, the amount was $6,015,000. In only one month during the year did the receipt of orders represent work for more than one-half of the company's capacity, and it was evident early in the winter that retrenchment was necessary to meet the falling off in business which overtook the plants during the last half of the year. Several of the smaller plants were therefore closed and orders confined to the larger plants, with a resultant economy in the cost of operation as a whole."

The Population of the United States, classified according to urban and rural districts, has been the subject of a recent bulletin by the Census Bureau. For this purpose the urban population has been defined as people residing in cities and incorporated places of 2,500 inhabitants or more. These figures have been tabulated and are given in the accompanying table. With those figures, it requires no great reasoning power to show why the prices of food stuffs have risen so in the last two decades. The decrease in the per cent. distribution of the rural population has been 10.2% in twenty years. In the last ten years it has been 5.8%. Analyzing the figures by geographical distribution shows that in the New England States there was an actual decrease in the rural population in the last decade, although the total population increased 20%. In the State of New York the increase was less than 1%, although in New Jersey and Pennsylvania there was a fair increase. Decreases in farming population, as the rural districts might be called, is also shown in the states of Ohio, Indiana, Illinois, Iowa and Missouri. At the present rate it will only be a few years before half the population of this country is living in incorporated villages and cities.

Rural and Urban Population.

Population.	Number		
	1910.	1900.	1890.
Total	91,972,266	75,994,575	62,947,714
Urban	42,623,383	30,780,875	22,708,430
Rural	49,348,883	45,213,700	40,239,284
	Per cent. Distribution		
Total	100.0	100.0	100.0
Urban	46.3	40.5	36.1
Rural	53.7	59.5	63.9

Practically all arrangements have been completed for the allotment of space at the three big Cement Shows to be held by the Cement Products Exhibition Co., during 1912. The first show will be in Madison Square Garden, New York City, Jan. 29, to Feb. 3, the second at the Coliseum in Chicago, Feb. 21 to 28, and the third at Convention Hall, Kansas City, March 14 to 21, 1912. This allotment of space by drawing for the three shows will take place at the offices of the Cement Products Exhibition Co., 72 West Adams St., Chicago, Friday, October 6. All applications should be filed on or before noon, Tuesday, Oct. 3. Space will be allotted by a similar drawing, immediately after the first drawing, to those exhibitors whose applications are received later than noon, Tuesday, Oct. 3.

A number of changes have been made in the general rules and regulations of the Cement Products Exhibition Co., for the cement shows during the coming year, the result of experience during previous shows. The services of a traffic manager have been engaged to assist exhibitors in routing, shipment and delivery of exhibits, and this service will be furnished by the exhibition company free of charge to the exhibitors. The Cement Products Exhibition Co., has obtained the services of Mr. M. E. Gordon of Chicago as installation manager for the New York, Chicago and Kansas City cement shows. Mr. Gordon has been identified with practically all the cement exhibitions held during the past six years and he is well known to a great many of the exhibitors for whom he has done work. His engagement as installation manager for the cement shows is the outcome of the ability and efficiency he has displayed at past shows.

The Tata Iron & Steel Works, the greatest industrial undertaking ever attempted in India, are in the course of construction at Sakchi, near Kalimati, in the State of Nagpur. The site was selected by Perin & Well, American engineers, and the plans were drawn by Julian Kennedy, Sahlin & Co., Pittsburgh and Brussels, who have also supervised the construction. About seventy European and American engineers have been employed in the erection of the plant. It is expected that the plant will be completed and tested within the next few weeks.

The plant was built by the late Jamsetji Tata, of Parsee. Sakchi was found to be a place which satisfied all the requirements. Here all the new materials of the iron industry are within easy distance. The company will obtain its iron ore deposits in Mayurbhanj. It has its own lime quarries in the Jubbulport district, and it can obtain cheap coal from the Jherria coal field close by. Water is supplied by the Subarnarekha River, 1½ miles away, and to provide against any emergency a reservoir with a capacity of 250,000,000 gals. has been constructed. The object of the company is to produce and sell steel. No necessary expense has been spared.

With regard to the commercial prospects of the new enterprise, Mr. Wells, general manager of the works, speaks confidently. There is a great demand in India for steel rails and for structural shapes of all kinds. The Government of India has undertaken to purchase annually 20,000 tons of rails.

A New Branch House of the Goulds Manufacturing Co. will be opened at Ohio and Franklin Sts., Chicago, Ill., to handle the business in the Middle

LIST OF CONTRACTS PENDING

Plans and Specifications on File.

The following plans (P.) and Specifications (S.) are on file for reference only unless otherwise noted at the office of The Engineering News Publishing Co., 220 Broadway, New York.

Bids close.		Noted in issue of
9-16	Retaining wall, Washington, D. C. ....(S)	8-31
9-23	Structural steel, Cuba...(S)	8-31
9-30	Sea wall, Norfolk, Va....(S)	8-31
9-30	Track, Norfolk, Va......(S)	8-31
10- 7	Piers, Washington, D C (S)	9-14

Light, Heat and Power Plants.

Bids close.		Noted in issue of
9-15	Lighting equipment, Lima Ohio	9- 7
9-15	Electric railway, Portland, Ind.	8-31
9-15	Electrical equipment, Sedro-Woolley, Wash.	8-31
9-15	Electric conduit and cable, St. Louis, Mo.	9- 7
9-16	Auxiliary steam power plant Thief River Falls, Minn...	9-14
9-18	Electrical fixtures, Los Angeles, Cal.	9- 7
9-20	Power equipment, San Francisco, Cal.	9-14
9-21	Electrical equip., Algona, Ia.	9-14
9-23	Copper bonds, Washington, D. C.	9- 7
9-25	Heating and ventilation system, Los Angeles, Cal....	9- 7
9-25	Power-house, etc., Scott, Sask.	9- ı
9-25	Electrical supplies, Brazil (Foreign)	7-27
9-31	Hydro-electric power plant, Riverdale, Utah............	8-24
10- 9*	Hydroelectric station and equipment, Wash., D. C.....	9-14
10-11	Power house, Colonial Beach, Va.	8-31
10-12	Lighting fixtures, Butte, Mont.	9-14
10-18	Street lighting, Charleston, S. C.	9-14

Bridges.

Bids close.		Noted in issue of
9-15	Bridge, New Portland, Me...	9- 7
9-15	Bridge, Fayette City, Pa....	9- 7
9-16	Bridge, Rockville, Ind......	9- 7
9-16	Bridges, Emporia, Kan.....	9- 7
9-16	Bridges, Richmond, Va.....	9- 7
9-16	Bridges, Wapakoneta, Ohio.	9-14
9-18	Bridges, Sussex, Va.........	9-14
9-18	Bridges, Independence, Mo.	9-14
9-18	Bridge, Moline, Ill..........	9-14
9-19	Bridge, Pearl City, Ill......	9-14
9-19	Bridge, Greenfield, Ind.....	9-14
9-20	Bridge work, Cleveland, O.	9-14
9-20	Bridges, Independence, Mo.	9-14
9-22	Bridge, Cincinnati, Ohio....	9- 7
9-22*	Bridge, Phoenix, N Y.....	9-14
9-23	Bridge, Clearfield, Pa......	9- 7
9-25	Bridge work, Minneapolis, Minn.	9- 7
9-25*	Viaduct, Fitchburg, Mass..	8-31
9-23	Bridge w'k, Vicksburg, Miss.	9-14
9-28	Bridge, Burley, Idaho......	9-14
10- 2	Bridges, Hendersonville, N. C.	9- 7
10- 4*	Bridge, Bermuda, La........	9- 7
10- 7	Bridge work, Cleveland, O.	9-14

Buildings.

Bids close.		Noted in issue of
9- 8	U. S. post-office, Pontiac, Ill.	8-10
9- 8	School, Somerville, Mass...	8-31
9- 9	Town hall, Canova, Sask....	9- 7
9-11	School, Alliance, Ohio......	9- 7
9-11	Building, New Orleans, La.	8-31
9-11	Church building, Cedar Rapids, Iowa	8-17
9-11	Schools, New York.........	8-31
9-12	U. S. post-office, Athol, Mass.	8-17
9-14*	U. S. post-office and court-house, Grand Rapids, Mich.	8-24
9-14	Sanitarium, Elizabeth, N. J.	8-24
9-14	School, Urbana, Ohio.......	9-14
9-15	School, Ridgefield Park, N.J.	9-14
9-15	School, Wellsburg, Iowa...	9-14
9-15	Edifice, Waynesburg, Pa....	9-14
9-15	School, Hot Springs, Ark...	8-10
9-15	U. S. post-office, Pendleton, Ore.	8-24
9-15	U. S. post-office, Washington, D. C..................	8-10
9-15	Church, Stamford, Conn....	8-10
9-15	Training school, Sacramento, Cal.	9- 7
9-15	Convalescent building, Sacramento, Cal.	9- 7
9-15	School, Crawfordsville, Ark.	9- 7
9-15	Passenger station, Truro, N. S.	9- 7
9-18	School, Norwood, Ohio......	9- 7
9-18*	School, Navesink, N. J......	8-31
9-18	Hospital, Yonkers, N. Y.....	9-14
9-20	School, Lindsborg, Kan....	9-14
9-20	Armory, Sarnia, Ont........	9-14
9-20	Church, Zanesville, Ohio...	8-31
9-20	Refrigerating plant, etc., San Francisco, Cal........	9- 7
9-20	Dwelling, Yosemite, Cal...	9- 7
9-20	Provincial home, Kamloops, B. C.	9- 7
9-20	Public building, Chesley, Ont.	9- 7
9-20	Court house, Selby, N. Dak.	9- 7
9-22	School, Green Castle, Pa....	9-14
9-23	Hospital, Toronto, Ont......	9-14
9-23	Library, Cleveland, Ohio....	9-14
9-25	School, Lexington, S. C....	9-14
9-26	School, Indianapolis, Ind...	9-14
9-26	Armory, New York, N Y...	9-14
9-30	School, Gainesville, Fla....	9-14
10- 5*	Ice-making ammonia compressor, Hot Springs, Ark.	9-14
10- 6	U. S. post office, Pendleton, Ore.	9- 7
10- 9	U. S. post office, Winchester, Ky.	8-31
10-10	U. S. post-office, Washington, D. C..................	8-31
10-31*	U. S. post-office, Minneapolis, Minn.	9-14

Water-Works.

Bids close.		Noted in issue of
9-14	Water system, Lyons, Ill...	9-14
9-15	Water pipe, Boston, Mass..	9-14
9-15	Wells, East Liverpool, Ohio.	9-14
9-15	Water system, Sylvan Grove, Kan.	9-14
9-15	Water-works, Rutherfordton, N. C.	9- 7
9-15	Distrib. system, Alturas, Cal	9- 7
9-15	Well, Sioux Falls, S. Dak...	8-24
9-15	Pump, Grand Forks, N. Dak.	8-24
9-15	Aqueduct, St. Rose, Que...	8-31
9-16	Pumping engine, Canton, Ill.	8-24
9-16	Laying pipe, Fillmore, Cal..	9- 7
9-18	Water main, Tonawanda, N. Y.	9- 7
9-18	Well, Sullivan, Ill..........	9- 7
9-18	Pumping machinery, Urbana, Ohio	9- 7
9-18	Engine, Springfield, Ohio...	8-31
9-18	Irrigation ditches, Brawley, Cal.	9-14
9-18	Water-works, Montgomery, Mo.	9-14
9-18	Reservoir, Farmington, Ill.	9-14
9-19	Reservoirs, etc., Allentown, Pa.	9-14
9-19*	Water intake, etc., Muskogee, Okla.	9- 7
9-20*	Tank, etc., Fort Washington, Md.	8-31
9-20	Water mains, New York...	9-14
9-20	Well, Ashley, N. D.........	9-14
9-21	Water system, Lost Nation, Iowa	9-14
9-21	Drain, etc., New York......	9-14
9-22	Water extensions, Fort Barrancas, Fla.	9- 7
9-22	Water mains, Grand Forks, N. D.	9-14
9-23	Water pipe, West Allis, Wis.	9- 7
9-25	Reservoir, etc., Scott, Sask..	9- 7
9-25*	Filtration plant, Fairfield, Iowa	8-24
9-25*	Water pipe, Haileyville, Okla.	9-14
9-26	Cisterns, Terry, Mont.......	9-14
9-26	Water extension, Fort Sam Houston, Tex	8-31
9-26	Blowoff, conduit, New York.	9- 7
9-27*	Water mains, Tarrytown, N. Y.	9-14
9-28	Reservoir, Lafayette, Ind...	9-14
9-28	Fountain, Fond du Lac, Wis.	9-14
9-29	Reservoir, Toledo, Ohio ...	8-31
10- 2	Ditches, Powell, Wyo......	8-31
10- 3	Drainage system, Brownsville, Tex.	9-14
10- 4	Pumping station repairs, New York	9- 7
10-11*	Water-works, Colonial Beach, Va.	8-24
10-16	Dam, Carlsbad, N. Mex.....	9- 7

Sewers.

Bids close.		Noted in issue of
9-14	Sewer system, Lyons, Ill...	9-14
9-14	Sewers, Dubuque, Iowa.....	9-14
9-14	Sewers, West Union, Iowa..	9-14
9-14	Sewers, Saratoga Springs, N. Y.	9-14
9-15	Sewers, East Liverpool, O..	9-14
9-15	Sewer, South Haven, Mich..	9- 7
9-15	Disposal plants, Rock Hill, S. C.	8-24
9-15	Sewers, Terra Haute, Ind...	8-17
9-15*	Sewer, Altoona, Pa.........	9- 7
9-16	Sewers, Wauwatosa, Wis...	9-14
9-18	Sewers, Montgomery City, Mo.	9-14
9-18	Sewers, Logan, Iowa........	9-14
9-18	Sewer, Winona, Minn.......	9-14
9-18	Sewers, Milwaukee, Wis....	9-14
9-18	Sewers, Chicago, Ill........	9-14
9-19*	Sewers, Rockford, Ill.......	9-14
9-20	Sewer extensions, Timmonsville, S. C.	9- 7
9-20*	Sewer, Reading, Pa.........	9- 7
9-20*	Sewerage system, Franklinville, N. Y.	9- 7
9-25	Sewage disposal plant Rockhill, S. C...............	9-14
9-25*	Sewers, Auburn, Ala........	9-14
9-28	Drain, Bethany, Ill.........	8-24
10- 5	Disposal plant, Madison, S. Dak.	9-14
10-11*	Sewers, etc., Colonial Beach, Va.	8-24

Streets and Roads.

Bids close.		Noted in issue of
9-14	Grading, Verona, Pa........	9-14
9-15	Street impvt., East Liverpool, Ohio	9-14
9-15	Paving, Trenton, N. J......	9-14
9-15	Paving, Salt Lake City, Utah	9-14
9-15	Macadamizing, etc., Columbus, Ohio	8-24
9-15	Road, Greenfield, Ind........	8-17
9-15	Paving, Hill City, Tenn....	8-31
9-15	Road construction, Harrisburg, Pa.	9- 7
9-15	Grading, etc., Warren, Ohio.	9- 7
9-15	Road improvement, Shelton, Wash.	9- 7
9-15	Paving, etc., Indianapolis, Ind.	9- 7
9-16	Gravel roads, Luverne, Minn.	9-14
9-16	Grading, etc., New Lexington, Ohio	9-14
9-18	Street impvt., Albany, N.Y.	9-14
9-18	Paving, Rochester, Pa......	9-14
9-18	Paving, Minneapolis, Minn..	9-14
9-18	Paving, Boston, Mass.......	9-14
9-18	Road construction, New Orleans, La.	9- 7
9-18*	Paving, Dorranceton, Pa....	9- 7
9-19	Road improvement, Pittsburgh, Pa.	9- 7
9-19	Grading, Spokane, Wash....	9- 7
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9-19*	Paving, Cohoes, N. Y.......	9-14
9-20	Walks, East Brady, Pa....	9-14
9-20	Paving, Colorado Springs, Colo.	9-14
9-20	Paving, etc., New York....	9-14
9-21	Road, Hartford, Conn......	9-14
9-21	Road improvement, Pittsburgh, Pa.	8-31
9-22	Road improvement, Cincinnati, Ohio	9- 7
9-22	Paving, etc., Middletown, O.	9-14
9-25	Grading, etc., Mt. Vernon, O.	9-14
9-25	Grading, etc., Minneapolis, Minn.	9- 7
9-25	Crushed stone, Sandusky, Ohio	9- 7
9-26	Grading, etc., Medina, Ohio.	9-14
9-26	Street improvement, Monticello, Ind.	9-14
9-28*	Paving, etc., Burlington, N.C.	9-14
9-29	Paving, Catlin, Ill..........	9-14
9-29	Street improvement, Cincinnati, Ohio	9- 7
10- 3	Gravel rd., Bedford, Ind....	9-14
10- 3	Paving, etc., Palatka, Fla.	9-14
10- 6	Road Impvt., Cincinnati, O.	9-14
10- 7	Grading, etc., Cleveland, O.	9-14
10-10	Paving, etc., Caldwell, Ohio.	9-14
10-10	Gravel road, Bluffton, Ind..	9- 7
10-21	Gravel road, Williamsport, Ind.	9-14

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9-15	Railway roadbed, El Paso, Tex. ....(Rys.)	8-24
9-15	Dredging, Wilmington, Del.	8-24
9-15*	Removing rock, Newport, R. I.	8-24
9-15	Railway construction (Rys.), Ottawa, Ont.	8-17
9-15	Rip-rap, Washington, D. C..	8-31
9-15*	Wire fencing, Tacoma, Wash	8-31
9-15*	Subways, Toronto, Ont.....	8-31
9-15	Ditch, Olivia, Minn.........	9- 7
9-15	Ditch, Willmar, Minn.......	9- 7
9-15	Repairing fire hall, Duluth, Minn.	9-14
9-15	Shed, Montreal, Que........	9-14
9-15	Meter Boxes, Boston, Mass.	9-14
9-16	Retaining wall, Washington, D. C.	8-31
9-17	Dredging, Washington, D. C.	9- 7
9-18	Dredging, Port Hope, Ont...	9- 7
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9-18	Fire-alarm telegraph, New York	9- 7
9-18	Ditch, Mankato, Minn......	9-14
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9-19	Dredging, Donaldsonville, La.	8-31
9-20*	Dredging, St. Augustine, Fla.	8-31
9-20	Jetties, wall, Cleveland, Ohio	9- 7
9-20	Breakwater extension, Meaford, Ont.	9- 7
9-20	Wharves, St. John, N. B....	9- 7
9-20	Wharf, Windsor, Ont.......	9- 7
9-20	Breakwater extension, Kincardine, Ont.	9- 7
9-21*	Dredging, Bridgeport, Conn.	8-24
9-21	Ditch, Thief River Falls, Minn.	8-31
9-21	Moorings, Tompkinsville, (S. I.), N. Y....................	9-14
9-22	Dredging, Richmond, Va...	9-14
9-22*	Dredging, Norfolk, Va.....	8-24
9-22*	Dredge, Wheeling, W. Va...	8-31
9-23	Structural steel, Cuba (U. S. Poss.)	8-31
9-23	Copper bars, etc., Panama (U. S. Poss.)...............	9- 7
9-25	Crushed stone, Sandusky, Ohio	9- 7
9-25	Wharf, Red Bay, Ont.......	9- ı
9-25*	Metal lockers, Chicago, Ill..	8-31
9-25	Wharf, boat-house, Kingston, Ont.	8-31
9-25	Fire apparatus, Winnipeg, Man.	8-24
9-25	Breakwater, Ottawa, Ont..	9-14
9-26	Dredging, Herkimer, N. Y.	9-14
9-26	Retaining wall, Owen Sound, Ont.	9-14
9-27*	Dredging, Washington, D. C.	8-31
9-30	Track, Norfolk, Va..........	8-31
9-30	Sea wall, Norfolk, Va......	8-31
9-30	Cranes, Wash., D. C........	9-14
10- 2	Channel excavation, Chicago, Ill.	9-14
10- 2	Breakwater, North Bay, Ont.	9-14
10-2*	Lockkeepers' houses, Wheeling, W. Va.	9- 7
10-2*	Dredging, etc., Buffalo, N. Y.	9- 7
10- 2*	Extending jetty, Portland, Ore.	9- 7
10- 2	Levee, Jackson, Miss......	9-14
10- 3*	Bulkhead, Providence, R. I..	8- 7
10- 7*	Dredging, etc., New York..	9- 7
10- 7	Piers, Washington, D. C. ..	9-14
10- 7	Dredging, Raritan, N. J....	9-14
10-16	Rock, Alpena, Mich.	9-14
10-10*	Mail - handling - apparatus, Washington, D. C.	8-31
10-10*	Mechanical equipment, Washington, D. C.	8-31
10-10	Elevator plant, Washington, D. C.	8-31
10-12	Dredging, Hawaii (U. S. Poss.)	9- 7
10-14	Lock, Louisville, Ky........	9-14
10-17*	Garbage plant (Garbage), Paterson, N. J.	8-31

Examinations.

Examination date.		Noted in issue of
9-21	Fuel Engineering Chemist, New York	8-24
10- 4	Laboratory Assistant, Washington, D. C.	9-14
10- 4	Laboratory Assistant in timber tests, Washington, D. C.	9-14

Western territory, including the States of Indiana, Illinois, Michigan, Wisconsin, Minnesota and Iowa. This house will take over the entire business of the present "Gould Company," with the exception of the line of centrifugal pumps. The branch house will exploit the new line of Volute centrifugal pumps, which are made at Seneca Falls along with the rest of the line of hand lift pumps, force pumps, windmill pumps of all types, spray pumps, both hand and power, triplex power pumps, rotary pumps, centrifugal pumps, air compressors, vacuum pumps and working heads.

Development of the Electrical Industry.—A preliminary statement showing the general results of the thirteenth census of establishments engaged in 1909 in the manufacture of electrical machinery and apparatus was issued recently by Census Director E. Dana Durand.

The electrical industries have had a most remarkable development during the past decade. The value of the machinery and apparatus manufactured for use in the general and utilization of electricity increased from $105,832,000 in 1899 to $159,551,000 in 1904, and $243,967,000 in 1909, or 130 per cent during the decade.

Dynamos, dynamotors, motor generators and similar machines constitute the most generic group of electrical machinery. The number of dynamos manufactured annually increased from 10,527 in 1899 to 15,080 in 1904, and 16,791 in 1909, an increase of 59% for the decade. The value of the dynamos for each year was $10,473,000, $11,084,000, and $13,081,000 respectively. The average capacity per machine increased from 55KW. in 1909 to 66 in 1904, and 84 in 1909. The value of the dynamotors, motor generators, boosters, rotary converters and double current generators manufactured increased from $380,000 in 1899 to $3,155,000 in 1909, or 730 %.

The total value of motors of all kinds, including supplies and parts, manufactured increased from $19,505,000 in 1899 to $22,371,000 in 1904, and $32,087,000 in 1909, or 64% for the decade.

The number of power motors manufactured annually increased from 35,604, valued at $7,551,000, in 1899 to 79,877, valued at $13,121,000, in 1904, and to 244,123, valued at $18,306,000, in 1909, there being an increase of 586% in number and 142% in value for the decade.

The value of the storage and primary batteries manufactured increased from $3,679,000 in 1899 to $4,244,000 in 1904 and $10,612,000 in 1909, or 188% during the decade.

The number of arc lamps manufactured increased from 158,187 in 1899 to 195,157 in 1904, and decreased to 123,543 in 1909. The value of these lamps decreased slightly in 1904 ($1,574,000) as compared with 1899 ($1,828,000), but, owing to the introduction of more costly types of these lamps, such as flaming arcs, increased to $1,707,000 in 1909.

The group of incandescent lamps include carbon filament, gem, tantalum, tungsten, glower vacuum, vapor and similar lamps used for lighting, advertising and decorative purposes. Some of these varieties were not manufactured in 1899 or 1904. A large number of decorative and miniature lamps, X-ray bulbs, vacuum tubes, etc., are now manufactured, but the varieties are so numerous that it is impossible to obtain accurate statistics of the number. The total value of the group increased from $3,515,000 in 1899 to $6,953,000 in 1904 and $15,715,000 in 1909. The value of the carbon filament lamps increased rapidly from 1899 to 1904, but there was a slight decrease in 1909, the value of the respective years being $3,442,000, $6,308,000 and $6,157,000. The manufacture of gem, tantalum, tungsten and other metal filament lamps was reported separately for the first time at the census of 1909, when they were valued at $7,682,000. Some of these new varieties of lamps were not reported separately at prior censuses, and it is possible that they were included with the carbon filament lamps, thus accounting in part for the apparent decrease in that variety of lamp.

The total value of all lamps reported for 1909 was $15,715,000. This does not include sockets, receptacles, bases, etc., or lighting fixtures of any character.

TRADE PUBLICATIONS.

(The standard sizes for pamphlets and trade catalogs recommended by all the principal engineering societies of the United States are: 3½ x 6 ins., 6 x 9 ins. and 9 x 12 ins.)

DERAILS.—Hayes Track Appliance Co., Richmond, Ind. Illustrated 4-p. circular; 8 × 10½ ins.

Shows half a dozen views of Hayes continuous-rail derails on turnouts of the Southern Pacific.

ASPHALT.—The Barber Asphalt Paving Co., Philadelphia, Pa. 6 × 9 ins.; pp. 11; illustrated.

In this pamphlet is found the reprint of an article by Dr. Albert Sommer entitled "Trinidad Asphaltic Petroleum and Its Use as a Road Material."

GAS METERS.—The Cutler-Hammer Co., Milwaukee, Wis. Paper; 5 × 8 ins.; pp. 32; illustrated.

This pamphlet describes the Thomas meter, recently brought out for measuring the flow of gases through large mains. The scheme of the meter is to raise the temperature of the gas a fixed amount and to measure the electrical energy necessary for the change. The recording instruments show the energy input and are calibrated in terms of cubic feet.

IRON SHEETS.—Inland Steel Co., Chicago. Paper; 3⅜ × 6¼ ins.; pp. 7.

As a new product, "Vismera" sheets are advertised here. They are described as the purest sheets made. They can be had black or galvanized, plain or corrugated.

STORAGE BATTERIES.—Gould Storage Battery Co., 341 Fifth Ave., New York City. Bulletin 12. 8 × 11½ ins.; pp. 12; illustrated.

This bulletin is given over to a description of the use of storage batteries as load equalizers on the direct-current system of the Detroit River tunnels which are now operated under electric traction.

LOCOMOTIVES.—Vulcan Iron Works, Wilkes-Barre, Pa. Paper; 6 × 9 ins.; pp. 144; illustrated.

A great number of different types of engine are illustrated in this carefully-made catalog. Most of them were built for contractors', logging, mine, or plantation service. Some compressed-air locomotives are included. The wheel arrangements show much variety.

GAS ENGINES.—Mesta Machine Co., Oliver Bldg., Pittsburg, Pa.; 6¼ × 9¼ ins.; pp. 15; illustrated.

This company has arranged in attractive form a description of the various features of its horizontal double-acting, four-cycle gas engine. The book deals only in generalities. The company builds only what may be termed large engines from 400-HP. up.

SELECTIVE SIGNALS FOR RAILWAYS.—General Railway Signal Co., Rochester, N. Y. Bulletin 114-A. 6 × 9 ins.; pp. 19; illustrated.

In this bulletin the company has described the equipment which it has designed for a system of selective signaling for railway work. The claim is made that the system combines to the greatest possible degree reliability, economy and speed.

ELECTRIC MOTOR CONTROL.—Cutler Hammer Mfg. Co., Milwaukee, Wis. 5 × 8 ins.; pp. 48; illustrated.

This company, in order to set forth the extent to which its control apparatus for electric motors is used in New York City, has arranged this description of the buildings themselves where their apparatus is found, together with some material on the particular uses of their apparatus.

TITANIUM STEEL RAILS.—Titanium Alloy Mfg. Co., Oliver Bldg., Pittsburg, Pa. Paper; 6¼ × 9⅜ ins.; pp. 40; illustrated.

According to the scant text of this booklet—its pages are devoted mainly to photographic views of rail sections and track—several hundred thousand tons of rails made with a ladle addition of 0.10% titanium are now in service, and the operating results are fully equal to those obtained from nickel-steel rails.

TECHNICAL PAINTS.—Cheesman & Elliot, Williamsport, Pa. 6 × 9 ins.; pp. 51; illustrated.

This pamphlet is entitled "The Review of Technical Paints." It discusses such things as what causes paint to decay, paints and vehicles, linseed oil for metal, reinforced concrete and cement coatings, steel-car paint, carbon blacks, iron oxide, graphite, blue lead and red lead, etc. The booklet is full of interesting and useful information for any who have to use paints anywhere.

ELECTRICAL APPARATUS. — Fort Wayne Electric Works, Fort Wayne, Ind. Bulletins 1130, 1131, 1132 and 1133. 10½ × 8 ins.; illustrated.

The first thing that strikes the eye on these new bulletins of the Fort Wayne Works is that they bear the title "Fort Wayne Electric Works of General Electric Co.," a legend which explains itself.

The first bulletin describes one type of the so-called "Northern" direct-current motors, which have been manufactured by this company for several years. The particular motor taken up is a series machine for hoisting and crane work.

The second bulletin describes the "Wood" system of incandescent street lighting. In this tungsten street lamps are used on a constant current circuit connected to automatic regulating transformers.

The third bulletin is given up to a multiphase belt-driven self-excited alternator for small plants, being made in sizes of up to 25 HP.

The fourth bulletin describes a single-phase watt-hour meter operating on the induction principle.

FLOW METERS. — General Electric Co., Schenectady, N. Y. Bulletins 4826, 4827 and 4836. 10½ × 8 ins.; illustrated.

These three bulletins describe a line of meters developed by this company for the measurement of water, air and steam flowing through pipes. They are an adaptation of the well known pitot tube apparatus. In the recording forms there is practically no difference in the three types of instruments. In the indicating forms a greater variety of design is seen. Their use about power plants, etc., is obvious.

LOCOMOTIVES.—Hannoversche Maschinenbau Actien-Gesellshaft, Hanover, Germany. Paper; 9 × 12¼ ins.

These German builders issue from time to time separate 4-page pamphlets showing each a single locomotive, with tables of dimensions, etc. A recent issue shows an outside-cylinder Mikado or 2-8-2 freight locomotive for the meter-gage line of the Ferrocarril Central Norte of Argentina.

A larger (32-page) pamphlet, prepared for the Turin exposition, shows a variety of types built for different countries, and also views in the works, etc.

GAS LIGHTING. — Welsbach Co., Gloucester, N. J. Bulletin 16. 7½ × 9½ ins.; pp. 8; illustrated.

This company has developed a new line of self-igniting gas mantel burners. The action depends upon the well known power of finely divided platinum to ignite combustible gases by catalytic action. When the gas is turned on at one of these special fixtures a small quantity before ignition makes its way into a small crown nipple where it comes in contact with the platinum filament. The gas is ignited here and the combustion travels down to the mantel burner. This change of conditions prevents further passage of gas to the filament, which is also protected by a baffle from the products of combustion which might come in direct contact with it.

ELECTRIC SWITCHBOARD APPARATUS.—General Electric Co., Schenectady, N. Y. Bulletins 4816, 4819, 4825 and 4831. 10½ × 8 ins.; illustrated.

The first bulletin describes a "telltale" switchboard intended for service on vessels using electric running lights. This board is usually located in the pilot-house and indicates whether or not the various running lanterns are properly illuminated. On the failure of any lamp, audible and visible warning is given on this board.

Bulletin 4819 describes three-phase, three-wire switchboards for 480 and 600-volt service suitable for general use in central stations and isolated plants. The bulletin contains dimension tables and connection diagrams.

In Bulletin 4825 a line of small accurate and moderate priced instruments intended for use on alternating and direct-current switchboards is presented. The construction of the instruments is briefly set forth and full-size scales are reproduced.

A type of oil-break switch suitable for installing in manholes is described in Bulletin 4831. These are for circuits having voltages up to 7,500.

In Bulletin 4848 is shown a combination ammeter and voltmeter enclosed in a single case for use on electric vehicles. The design is not shown in detail.

ELECTRIC-RAILROAD APPARATUS.—General Electric Co., Schenectady, N. Y. Bulletins 4829, 4834, 4851, 4852 and 4855. 10½ × 8 ins.; illustrated.

The first bulletin describes small electric locomotives for industrial use. The bulletin shows how they have all the requirements possessed by steam, animal or hand haulage for such plants. Numerous installations are pictured.

The second bulletin describes the electrical equipment of the Detroit River tunnels, which are now under electric operation. The article is a reprint from the "Electric Railway Journal."

Bulletin 4851 is an elaborate brochure entitled "Electricity in the Service of Steam Railroads." It describes the numerous pieces of work with which this company has been identified in installing electric traction on steam roads and in small auxiliary uses.

Bulletin 4852 describes a 50[illegible] electric locomotive for interurban roads. This locomotive is a standard design of the company.

The last bulletin named contains an elaborate presentation of the subject of gas-electric motor cars, the manufacture of which this company has entered upon. These cars have a forward compartment containing a gasoline engine direct connected to an electric generator, the latter driving railway motors on the axles of the car much as in ordinary electric-railroad practice.

TACHOMETERS.—The Bristol Co., Waterbury, Conn. Paper; 8 × 10½ ins.; pp. 12; illustrated.

The Bristol long-distance recording tachometer indicates and records the revolutions of shafting and machinery on a dial at some distance from the revolving shaft. The tachometer consists of a tube enclosed in a base casting and revolved in a horizontal plane by connection with the shaft whose revolutions are to be measured. One end of the tube is left open, and connection from the other end is made by means of a flexible copper connecting tube with a special low-range recording vacuum gage of the Bristol type. The motion of the revolving tube causes a partial vacuum in the flexible connecting tube and in the diaphragm tube of the recording gage. The degree of this vacuum is recorded on a chart graduated in revolutions per minute.

For other Proposal Advertisements see pages

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of Advertisements and Construction News, page 132

BRIDGE PIERS, ETC.

Phoenix, N. Y.

Sealed proposals will be received until the 22nd day of September at 2 o'clock P. M. at the office of the Town Clerk of the Town of Schroeppel, at Phoenix, N. Y., for the construction of the piers, abutment and substructure of the reinforced concrete bridge to be built across the Oswego River at Phoenix, N. Y.

Plans and specifications may be seen at the office of the Town Clerk of the Town of Schroeppel, at Phoenix, N. Y., and the Town Clerk of the Town of Lysander at Baldwinsville, N. Y.

Proposals must be accompanied by a certified check in an amount equal to five per cent. of the amount of the bid, payable to the undersigned Town Superintendents, as a guarantee of acceptance and performance of the contract by the party to whom it may be awarded.

Superintendent of Highways of Town of Schroeppel.

Superintendent of Highways of Town of Lysander.

LAYING WATER MAINS.

Tarrytown, New York.

Sealed proposals will be received by the Board of Water Commissioners of the Village of Tarrytown until 7.30 P. M., Wednesday, September 27, 1911, for laying about Eleven thousand (11,000) feet of Ten (10) inch cast iron water mains and about Two thousand (2,000) feet of smaller sizes, including setting valves, hydrants and specials.

All bids must be made on regular forms furnished by the Board, and must be accompanied by certified check equal to Five (5) per cent. of the bid.

Plans, specifications, form of contract and bidding sheets may be seen at the office of the Board of Water Commissioners, or copies may be had on deposit of Five ($5.00) Dollars to insure safe return.

The Board reserves the right to reject any and all bids.

DAVID S. MERRITT,
Engineer and Superintendent of Tarrytown Water Works.